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THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

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We cannot but take pleasure in giving to our readers extracts from the able agricultural address of Genl. Bradley T. Johnson. In it we find several important deductions from history, suggestions for serious reflection and valuable facts. Among other things we are glad to see that the General accords with us on the necessity of having a State Bureau of Agriculture. Upon this point he argues ably. We have urged the same in our humble way for years past. Ex Gov. Bowie in one of his messages was the first executive officer of our State to call attention to this important help to the welfare of our agriculture, and to the immense gain in our resources and general prosperity such a properly conducted institution would be. It would in the outset have caused a considerable outlay, which the then burthened treasury of the State it was thought would not justify. But had it then been established, our present financial condition would be much improved and the State been more than reimbursed by the enlarged capital for taxation by the great results of the Bureau. A Bureau properly conducted would bring an increase of population and capital—develop hidden treasures, expand old and open new industries, increase individual wealth and add to the public information and prosperity. It is not yet too late for our farmers to maintain and practically carry out this idea by means of legislation. What we have lost, posterity may regain. Our old State is fertile in soil, incalculably great in her water power, and in the vastness of capacity of her wa-

ters to produce food and luxuries for our own people and for distant markets; in the bosom of her hills and slopes lie concealed mines of mineral wealth, manurial substances, and many treasures of earth, clay, rocks, etc, that science and art can manufacture into hoards of wealth. Then we ask as we have asked before, why should we not utilize this wealth and spread before the world our grand resources:

We regret that we cannot for want of space give this excellent address in its entirety, but have to confine ourselves to extracts only:—

**Address by General Bradley T. Johnson,
of Baltimore.**

DELIVERED BEFORE THE HARFORD COUNTY AGRICULTURAL SOCIETY, BEL-AIR, OCT. 11, 1882.

“The status of agriculture, of its proprietors and laborers, is the sure test of the soundness and permanence of political institutions. Where the farmer and his men are free and intelligent, there free institutions, and intelligence and honesty in the administration of them are most certain to be permanent, and happiness and prosperity to result. When the landholder is not bound to the soil by the tie of interest and affection, and his laborers are debased and badly paid, there, beyond a doubt the process of decay has begun. The forces of society are wielded for the power, the luxury and gratification of the few. The masses become an ignorant herd and civil disintegration takes place by a law as certain in its operation as the law of gravitation.

“While the agriculture of Italy furnished happy homes for the farmers and food for Rome, she was free and powerful, and her arts and arms swayed the world. When

her lands became the property of great proprietors; when their villas and palaces decorated the slopes of the Appenines, and the valley of the Tiber and their peasantry were slaves, then Rome was fed from Egypt, and swift overthrow of her empire was the consequence.

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"The laws of nature are inexorable. The same causes that produce the results we know of, in the Campagna, will insure the same in Maryland. The disorders in society which curse Ireland will be experienced in Harford county if the same causes for them are permitted to arise. The operations of the law are slow, obscure and remote. Generations may elapse before their full effect is felt and seen, but the operations will go on all the same, and the ultimate result is certain. If the agriculture of Maryland is permitted to sink into the control of selfishness and ignorance; if all the genius, the energy and power of society is to be absorbed by commerce, trade or intellectual occupations, then we may know that we shall have a brief and splendid career of luxury and self indulgence, development of taste, art and science; but liberty, integrity and patriotism—the sole foundations and guaranty of permanent happiness and prosperity will be lost.

"If, on the other hand, we now lay deep the foundations of prosperous, intelligent and happy agricultural institutions, we secure to ourselves and our posterity the certain guaranty for permanent liberty, virtue and happiness.

"The causes that are operating upon the condition of Maryland agriculture are widespread, far reaching and powerful. The imagination hardly takes in the agricultural future of this American empire. The States south of the Potomac and east of the Rio Grande contain 100,000 square miles more than all the Northern States, from Maine to the Rocky mountains.

"Florida is as large as New York, New Jersey and Connecticut. Texas is larger than all new England, New York, New Jersey, Pennsylvania and Ohio. The unsettled North-west beyond Minnesota, will make twelve States as large as New York. All this territory is virgin. There is more land belonging to the United States in Mississippi than in Kansas, Nebraska or Minnesota. The southern country is less known than the new territories. In old Virginia,

within three hundred miles of Washington, there are deposits of minerals, and metals more abundant, more various, and more valuable than in any other equal area of territory on the continent, of which we now have knowledge. One county there of 600 square miles, has no wagon roads, and no wheeled vehicle has ever been in it, unless such a one has been taken there in the last twelve months. I venture to say that the mountain regions of North Carolina, in soil, in climate, in diversified wealth of mine and forest, is unexcelled upon this globe.

"In the fine lands along the Virginia and North Carolina line, the labor of a single man will produce from \$2,000 to \$2,500 worth of tobacco, and in Mississippi the market product of one laborer in cotton is worth near \$2,000. This incalculable wealth of soil and climate is offered to the labor of the world almost for the asking. The toil of a single year will provide a man with a free hold and a home.

"The result of this condition of things is easily foretold. The printing press, the ocean steamer, the telegraph, have drawn all the nations of Christendom into a closer relationship than Bel-Air had with Baltimore city three generations ago.

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"It touches the heart of a Maryland man when he contemplates the present condition of some parts of this beautiful State and remembers what it has been. The lower peninsula was settled by our ancestors two hundred and fifty years ago. The blood of some of you here present flows directly from these pilgrim pioneers. It is so blest that I know no country in the world which surpasses it. The Chesapeake, the Potomac, the Patapsco temper the climate, supply sources of never failing energy to the soil, and contribute to the evolution of race characteristics inferior to none anywhere. The valley of the Arno never showed greater loveliness of sky, earth, air and water; nor did Florence ever produce more beautiful women, and braver, purer, more intellectual men. It is the birthplace and nursery of all those institutions which have formed Maryland character and implanted in it that manliness, independence and love of country which supports and adorns it. There were planted the principles of liberty of thought, and equality of rights of all freemen. From these came

the courage, the genius, the practical statesmanship and business capacity which led and directed the revolution of 1775. Yet, under the operation of these causes which I have indicated, for a century, that garden of Maryland has become desolate and depopulated. St. Mary's, Charles and Calvert contain fewer population now than they did in 1780. Their homesteads are wasted; their farms are desert; their altars are overthrown. This very morning's paper contains an account of one of the oldest chapels in the State blown down in Calvert in the late storm. The same condition exists in some of the lower counties of the Eastern Shore. It is universally true in Eastern Virginia and in the Carolinas. The cause everywhere is the same, and is irresistible. Agriculture does not present the advantages nor the profits that may be found in the outside world, and the consequence is that all the energy, intellect and ambition produced in these old communities seek fields for enterprise elsewhere.

"While these causes have not operated so generally in the upper part of the State they have operated to an appreciable degree. The profits of agriculture have steadily declined and the attraction of the pursuit as steadily diminished. There is a steady drift of the young to other pursuits and to the cities.

"These effects will continue until you remove the cause, and the ultimate result will be that while land may become owned by large proprietors and operated by large capital, the land tiller will become more the refuse from the other pursuits of life. When that takes place and the farmer no longer occupies his place as an independent and patriotic citizen, then we will have reached our meridian as a State and will steadily decline in power as in liberty.

"I believe these causes may be removed and I know that agriculture may be made to take its place in Maryland, as the pursuit securing great happiness, guaranteeing great personal independence and requiring and rewarding the highest intellectual effort and accomplishment.

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"I have now indicated the line of action by which Maryland farming may be made to prosper against the competitions of Texas and Dakota.

"1st, To draw into our agriculture more intellect, more science, more ambition. 2d,

To offer to these qualities greater inducements for success. 3rd, To render success certain, to apply such intelligence and science to agricultural operations as to eliminate almost chances of failure. The first question is, as to the practical way of producing these results. The plain answer is to provide some method of collecting and distributing this knowledge so necessary to the farmer.

"There exists no official power in Maryland to collect data of the kind relating to labor production or employment, or the resources of nature. All we know about our State is as to the amount of property taxable and taxed. Every particle of information about our social condition, about the progress we are making, or the delay we are suffering, comes from the Federal census taken every ten years. In the intervening period we are in Cimmerian darkness. I can get accurate information about France or Massachusetts. I defy any of you to furnish reliable data about Harford county.

"The first thing then to be done is to establish a Bureau of Agricultural information and statistics. Your objection to this is on your lips—there is no use trying that—it would only result in a party job for the benefit of some worthless politician, who, failing in everything else would thus be pensioned on the State.

"All I can say in reply to that is—that if you have not courage enough and independence enough to see that your servants employ good and efficient agents for you, then you deserve to be governed by your servants. They are really the masters and they ought to be. But if you will assert your determination that you will have a good workman to do good work—you will get him beyond a peradventure. The Bureau of Agriculture would have a branch in each county, each county branch would have a station at every few miles and at convenient places. The whole would be connected by telegraph wires, just as broker's offices from Maine to San Francisco are connected with New York and simultaneously served at the stock operations in the New York Stock Board.

"The weather, the prices, the condition of the crops, the supply and the demand could be furnished every day, and several times a day from the central office to the counties and thence to the local stations,

Gov. Vance said the other day, at Baltimore county, that the Signal Bureau had arranged to kindle beacon fires in the top of Mount Mitchell, in North Carolina, on the approach of frost, and thus give warning to the country in a radius of one hundred miles around.

"The storm signals of a week ago kept hundreds of vessels in port and saved property and life.

"There is no reason why the farmers in Harford county should not have a reasonable notice of all conditions of weather. The State Bureau with its county branches would supply all analyses of soil necessary.

"The State Bureau of Agriculture ought to be charged with other and larger duties. The absolute ignorance in which we all live as to the physical condition of our State is simply incredible.

"Its area in square miles is reckoned at eleven thousand one hundred and twenty-four. But this is measured from the point where Mason and Dixon's line starts from the Delaware to the Southern border of the Potomac, and from the Fairfax Stone to the low water mark of Worcester. How much is covered by the Potomac, the Patuxent and the Patapsco; how much by the Chester the Choptank and the Wicomico; how much by the great Chesapeake and the Susquehanna; who can tell? Who has ever estimated? No one has an approximate idea of how much land there is in Maryland. There has never been an investigation of the resources of the State and no one knows what wealth of power lies hidden in her bosom to restore exhausted lands and to revive and invigorate her agriculture. For more than two centuries an active and intelligent population lived and worked in South Carolina. For that period the city of Charleston traded and flourished.

"Fifty years ago a species of rotten mineral found in abundance on the banks of the Ashley and Cooper was used to macadamize its streets. It was discarded because it made too much dust. Within the last fifteen years scientific explanation has shown this to be the immovable phosphate rock, and that it lines the bottom of the great rivers and lays its strata under the adjacent plantations.

"The discovery of the phosphates has, more than anything else, increased the production of the South and extended the

cotton belt through five degrees of north latitude. Within the last two years the cuts for the Southern Maryland Railroad, in Charles county, have exposed an immense deposit of oyster shells, which industry and enterprise are now converting into lime. I can remember when Montgomery was one of the poorest counties of the State. Shell lime and fertilizers have placed it second among our wheat producing counties. I look for equally happy results from the antediluvian deposits of Charles.

"In Queen Anne's, I recently saw a field which had been in cultivation for seventy years. Twelve inches under the surface was a thin strata of disintegrating oyster shells and the condition of the land was as productive as ever. Now no examination has ever been made of the unknown deposits in the State useful to agriculture. It requires no great scientific requirement to know that in a country so largely washed by tide-water—16 counties out of 23 border on tide—must have been the scene of great geological and physical changes, where numerous and rich deposits, the product of the ocean, exist useful, invaluable to agriculture. Besides the duty therefore of a constant supervision of the condition of agriculture in the State, and of collecting and distributing information necessary to the farmer, the Bureau of Agriculture ought to prosecute a careful and thorough physical survey and examination of all the resources of our lands and our forests.

"The discovery of the existence in abundance of a material in Harford county, useful for fertilization of land, would be productive of more happiness and prosperity to agriculture than any other discovery I know of. No one knows whether such material does or does not exist, for no one has ever investigated the subject.

"Such a Bureau as I have suggested is entirely practicable. The science, the skill and the business capacity for execution can be readily provided, and with an economical administration of government, it can be organized and operated without increase of taxation. The importance of it is such that the pecuniary cost is of comparatively secondary consideration. But quite equal in importance to these suggestions is the necessity of providing for the very best facilities for transporting intelligence, persons

and produce. The railroad commissioners of Massachusetts consider that to supply a territory properly with railroads, one mile of road is necessary to every four square miles of territory. I suppose the narrow gauge surface road will ultimately supercede the macadamized road, just as the latter did the old dirt roads. Railroads and telegraphs ought to be brought into common use for farm purposes, just as threshers and reapers have come in.

"There is no reason why telegraphy should not be taught in our public schools as a branch of common education. It is easy and would be a good substitute for some of the *"ologies."* Some fundamental conditions of Maryland farming are worth considering."

The Address of Hon. Barnes Compton, at the Agricultural Society of Montgomery County, 20th of October.

Our space only allows us to give a single extract from this eloquent address, the subject of which was the elevated character of Agriculture as a profession, and its important relation to the purity of liberty and the existence of our government. Before closing the speech he said ;

"The great conservator of the nation's moral well being is the steady pace, the calm survey, the conservative temper, the rational habits of the great body of her agriculturists. Not only upon the product of their care and toil does she rely for her material stability and progress, but upon them as a balance wheel for the preservation of a healthy and rational system of ethics. Nor does she or should she look in vain, for no where else can be found so fair a field for the cultivation of all the virtues which go to make up the term of an enviable and estimable life as in the home of the thrifty agriculturalist. In constant contact with the inspiring lessons which nature is perpetually teaching, removed from the ever recurring temptations which beset the man who treads the crowded mart or busy thoroughfare of the city, moving and living within the privileged and ennobling influences of the family circle, encouraged by the almost constant presence and smile of God's best gift to man, with the life and hope of childhood's

gay life beaming around him ; he who is a bad man under such circumstances would be a demon elsewhere. The wretch who thus happily surrounded, forgets his God-given mission, concentrates all in self, smothers the nobler impulses of his nature, stifles and perverts the promptings of an honorable manhood, listens to the suggestions of brutish instincts, encourages the teachings of infidel sophistry and prides himself upon practices which demoralize and debase, but illustrates the depths to which perverted human power can sink our natures. The adoption by large masses of people in many localities, of heresies and *isms* which are fast sapping the very foundations of society, show how far and fast we are drifting from the land-marks which the wisdom and virtue of our fathers established.

"I fear indeed, the tendencies in all of what are boastfully called 'centres of civilization' are becoming perverted and vicious. 'Tis in the out-lying provinces, the agricultural districts that these moral pestilencies are slow to take root, and in their successful resistance, in their maintenance of the orthodox precepts and conservative practice which have all along characterized the rural population of our State and country, rests the hope of our ultimate well being as a people. Driven along by the maddening crowds in ignoble strife, dazed in the desperate struggle for gain by the glittering displays of accumulated wealth, unsettled by the confusion and multiplicity of conflicting statements and sentiments, living a life of ignoble ease, or exhausting the energies of mind and body in the effort to attain such, our people are becoming insensible to the demands of free citizenship in a representative government, if not indifferent to the impulse of true patriotism. The shock of some alarming usurpation will yet arouse them to their danger and break the charm of their fancied security.

"The honest, aye, the intelligent yeomanry of our country will be the first to warn and protest and the last to acquiesce in any attempt to betray the constitution or pervert the liberties of the people."

INVIGORATING FOOD for the brain and nerves is what we need in these days of rush and worry. Parker's Ginger Tonic restores the vital energies and brings good health quicker than anything you can use.—*Tribune*. See other column.

Farm Work for December.

The work to be done on the farm during the month of December completes the round of labors for the year. All the crops, in this latitude, are gathered and housed; the stock secured for the winter with such protection from the inclemency of the weather as the means or ability of the farmer can devise. But in a life devoted to agricultural pursuits, there is always something to be attended to, and much can be done at this period of the year which left undone will entail additional labor when time is more precious and the demands of a new season press most heavily upon the landowner. Whatever, therefore, can be pushed forward when winter sets its seal upon the soil is so much gained in advance of the opening of spring work. Various kinds of improvements may now be undertaken.

Fattening Hogs.

By the early part of this month hogs should be well advanced in fattening, and as the cold begins to prove intense the food should be of a richer quality so as to complete the process of fattening as early as possible. The hogs should be fed regularly three times a day, their sleeping apartments should be cleaned out and freshly bedded once a week, and the yard attached to their pens should be supplied with relays of coarse materials to work up into manure. Corn meal mixed with slops from the house and suffered to remain until it becomes slightly sour, is the best food for hogs at this season, and any acidity which may arise from liberal feeding should be counteracted by furnishing the pens with a supply of charcoal and rotten wood. Fresh water should also be given after each meal and the troughs should invariably be kept clean.

Materials for Manure.

Seize every opportunity whilst the weather remains open and there is no snow on the ground to collect piles of woods' earth, leaves, fibrous materials, the turf of headlands, &c., to be used in compost heaps with stable manure sufficient to produce fermentation in each heap. The safest rule is one load of stable manure to three loads of compost stuff—but a less quantity of stable manure with the black water of the barnyard will suffice when the supply is scanty.

Firewood.

See that a good supply of firewood is cut, hauled and stowed away under a shed, to season, for next winters use. Where coal can be had at anything like a reasonable price it is cheaper and more handy, than wood, even when it is cut on the farm.

Winter Plowing.

So long as open weather lasts all stiff clays that are not wet will be benefitted by winter plowing. The action of frost on the upturned soil, mellow and disintegrates it, renders soluble the plant food contained in it and makes the work of further tillage in the spring, comparatively easy.

Protection of Stock.

All kinds of stock in our climate should be carefully protected from winter cold and winter storms. Where, as in some cases, regular sheds would prove to the struggling farmer too expensive, he can at least shelter them by making the walls of poles and brushwood, thickened and rendered tolerably impervious by bundles of corn stalks drawn from the field after being stripped of their leaves and tops; and no warmer roof can be constructed than one of straw well thatched and bound to its place by withes and pegs. Many of the best foreign barns are thatched, and when the work is well done such a roof will last for many years.

Care of Young Cattle.

It is always best, when it can be done, to keep young cattle in a yard to themselves. They should be provided, of course, with comfortable shedding, and should have their stalls well bedded with leaves or straw. These sheds ought to have a southern exposure and should open out into the yard, where the cattle should be allowed to take exercise in mild weather. They should be fed three times a day with hay or long fodder, and at the evening meal should receive a feed of grain sufficient in quantity to keep up the animal heat, and keep them in a good growing condition. A regular supply of fresh water, to which they can have free access, should also be provided and they should have salt not less than once a week.

An occasional feed of chopped roots sprinkled with corn meal will also be found of decided advantage.

Working Horses and other Animals.

All such animals should be kept throughout the winter comfortably housed in moderately warm and well ventilated stables or sheds. Their food should be nutritious but need not be so abundant as when engaged in hard field work. They should be regularly fed nevertheless three times a day, and regularly watered at least twice a day, and their stalls should be kept clean and well supplied with straw for bedding.

Sheep.

Where sheep are kept they should be protected in the winter by sheds facing South or Southeast, and covered with leaves and woods' mould, and over these a light covering of straw to be renew-

ed at intervals, The older and younger sheep should be kept separate, if that be possible, as the supply of food can be regulated better. The old sheep should have three pounds of cut hay to the head each day, with occasional messes of roots or a little corn meal.

The younger sheep should receive about two and a half pounds of cut hay per day and messes of roots cut up finely, once or twice a week—a supply of salt, easily accessible, is also essential to the health of the flock.

Mares in Foal—Cows and Heifers in Calf.

Extra care should be given to these animals. Their winter quarters should be roomy and comfortable, and their food such as will keep them in good health without loading them with fat. The stalls for the mares should be kept very clean, the bedding frequently changed and the stable light and airy without being too cold. They should have three moderate feeds of ground grain mixed with cut hay or straw daily. The quantity of straw should be about seven pounds at each meal, and they should be allowed access to water, and in mild weather free exercise in the yard.

In calf cows and heifers.—Where it is convenient to do so these should have separate shedding and yard, but as this is not always convenient they should at least receive all the care and attention their condition requires. Their sleeping place should be kept clean and moderately warm, their food nourishing, but not in excess, and regular exercise and access to water are indispensable.

Salting Stock.

Stock of all kinds should be salted at least twice a week, a mixture of wood ashes, oyster shell lime and salt being the best for this purpose. Of this mixture two ounces twice a week for each head of grown stock, and from half an ounce to one ounce, according to age, for the younger animals will be found sufficient.

Breeding Sows and Store Hogs.

See that these receive careful attention. Their sleeping apartment should be dry and warm, and their food sufficient to keep them in good condition without producing an excess of fat.

Fencing.

In open weather get out all the feeding stuff from the woods that may be required for next seasons uses, and where posts and rails constitute the fences of the farm, haul the stuff to the barn or shed, and in bad weather point and prepare it for setting.

Ditching and Draining.

In wet clayey lands there are frequently opportunities in winter for ditching and draining them better than can be found at any other season. An old axe will cut through the crust of frosted earth and the numerous small roots that often form a network in such soils. The best drains are those that are formed of stones of suitable sizes, but where these are not to be had a good covered drain may be made with pine poles—two of them forming the sides of the drain and the third resting above the two and over-lapping them. Over these place straw, turf or cedar boughs to prevent the loose earth from passing through whilst filling up the drain, and the work is then done. Of course drain tiles are best of all if they can be afforded.

Garden Work for December.

There is very little to be done in the garden during this month. Such work however, as requires attention, and can be done under favorable circumstances, we now proceed to state.

Cauliflower and Cabbage Plants.—Where there is a hot-bed and provision has been made for seeding Cauliflower and Cabbage seed as soon as the plants are well advanced see that the sashes are lightly raised every mild sunny day to admit air. This can best be done by inserting a wedge or two under the sashes. The object of this is to make the plants hardy and to prevent them from spindling. The best time for this purpose is from mid-day until three o'clock in the afternoon; close then the sashes again, and as night approaches, cover them well with matting or straw.

Small Salading.—To sow these in the winter season requires of course a hot-bed. Sow in the frames the seeds of such sorts as are preferred; they will not take up much room, will grow quickly, and will form a grateful addition to the table.

Lettuce.—Lettuce may be grown in the open air in winter, if protected by a covering of brush, but the plants are more certain if grown in a cold frame, opened occasionally, in the day time, but covered at night.

Fruit Trees.—Where these have not been cleansed of moss, scrape it off and apply to the trunk and larger limbs a dressing composed of one gallon of soft soap, one pound of flour of sulphur, and one quart of salt.

Celery Beds.—Dig up these thoroughly and leave them rough so as to expose the greatest possible portion of the upturned soil to the ameliorating action of frost.

Shading the Soil.

The improvement of the soil by clover has been ascribed to the great mass of roots left in the ground after removing the crop, but clover does more, it shades the soil. We are all familiar with the fact that a loose board left on the ground for a short period of time, darkens the soil, invites earth worms, and enriches the location occupied by it. Darkness is an essential matter in the process and as but little moisture is evaporated, and retention of such made easy by capillary attraction, we can easily divine the cause of the change.

The darkness and protection from the sun's rays afforded by the board are favorable conditions towards the promotion of humus; and although not a pound of manure or other fertilizer may be present, the elements of the soil themselves are converted into plant food, and of a quality better suited for appropriation than can be effected in any other manner. It is this fact also, which prompts our farmers to prefer barnyard manure to commercial fertilizers, for it not only adds to the soil its own richness, but, during the process of decomposition, when placed on the soil causes humus to form quickly; while fertilizers must first act and re-act chemically on the minerals of the soil to do the same thing. Every advantage of giving shade or darkness, be it but little, is in favor of the manure; and when spread over a large surface this is no inconsiderable quantity.

Most scientists base their estimates of the fertilizing material left by clover on the value of the accumulated humus in the soil, and while we are not prepared to dispute the claim that the roots are quite a considerable mass, yet, the shading of the soil by the crop has more to do with the increased fertility than may be supposed. We do not believe we would be far out of the way to make the claim that if any farmer will cover a rod of ground with boards and leave them there for a while, on removing them the soil underneath will be found quite fertile, even if previously barren. This at once gives an insight into the problem of how clover renovates soils, and a few experiments by some of our friends, by way of testing the matter will be found not only interesting, but valuable.—*Philadelphia Farm and Garden*,

Buckwheat as Food.

A French scientist who has investigated buckwheat, gives the following as the result of his researches:—Buckwheat cakes are equal to pure white bread as regards the phosphates or bone-making material and nitrogenous principles which they contain, and are superior to bread in fatty matters. The general yield of buckwheat when cooked, is about three times the weight of flour used, showing that flour will retain from 40 to 41 per cent. of water. Between different batches of ground buckwheat there is a great dissimilarity of composition, one batch containing nearly seven times as much nitrogen, twenty-five times the amount of phosphates, and a hundred and fifteen times as much fatty matter as another. The bran is the richest portion of the buckwheat, but cannot be digested by weak stomachs. The finest qualities of buckwheat flour, and the white mill dust especially, are very suitable for children and persons in poor health, while the stronger varieties require a strong stomach and much exercise for their proper digestion.—*The Millstone*.

The Making and Keeping of Cider.

To make good cider, good, sound, well ripened, clean apples must be used, and no others. It is better to crush them than to grate them. Everything about the mill with which the apples, pomace or cider can come in contact must be clean—perfectly so.

The apple juice when expressed from the pomace must be filtered, so as to take out every particle of apple or other solid matter which may be floating in it. Cleanly washed sand is sometimes used, and animal charcoal; but probably a mass of perfectly clean cotton or cotton cloth of many thicknesses will be found as good as anything. The cider should be expressed from the pomace as quickly as possible after the apples are crushed, and the juice will be nearly as white as water if it is immediately filtered. If the pomace is allowed to stand some time after crushing the apples, before pressing, the cider will be colored and not as good.

When made as above, and filtered, the question is, how to cure it and keep it fit

for use. First, a clean cask. If it has been used for cider before, it must be wholly freed from the flavor of its previous contents. This may be done by burning out the inside; no other way is certain, though long soaking in water and washing may make a tolerably clean cask; but it is better to use a new cask, or one that has been used for spirits. Before filling the cask adapt a faucet to it, so that the contents can be drawn off three or four inches above the bottom. Fill the cask perfectly full and place it in a cool cellar where it will not be moved or in the least disturbed, and fit a bung with a small aperture so that gas may escape while fermentation is going on. Before fermentation has ceased bung up perfectly tight, with a small faucet or its equivalent, through or near the bung, by which air may be admitted when necessary; but this must not be opened except when it is impossible to draw through the lower faucet without admitting air, and then admit as little as will answer. Cider fit for drinking cannot be made in warm weather unless you have a much cooler place than farmers' cellars generally are to store it in. A temperature below 50 is indispensable. With such places for storage as farmers are likely to have, cider should not be made until November.

When made, filtered and stored as before described, it should not be drawn from or in any way moved or meddled with until it is cured, which will not be until May following, and it will be still better to let it stand longer before drawing from it.

You can draw from it some time before it will be necessary to admit air through the faucet on the top of the cask, as the gas generated will force the cider out; but when it ceases to do that, then a little air must be admitted from time to time through the upper faucet, which must be kept closed except when it is necessary to admit air to the cask. Cider made and kept and cured in this way will be more palatable and more wholesome than any wine, and is much safer to use in moderation than lager beer and ale.

Thus it will be seen that to have good cider, we must have the pure juice of good ripe apples, in a perfectly clean cask, placed in a position in a cool cellar where it will not be moved or jarred, and after the apple juice has gone through about three-quarters of its period of fermentation, tightly

closed and then left to cure until about May 1st. If the air faucet is carelessly left open the cider is spoiled—reduced to the condition in which we generally find cider—unfit to drink.

If you want apple juice or uncured cider for use during the winter, set apart a cask sufficient for the purpose, made and treated as above described.

Most farmers can add to their receipts by using their sound apples which are too small or ill-shaped to be merchantable, in the way indicated and promote temperate and good health.—C. H. in *Country Gentleman*.

Oiling Wagon Wheels and other Woodwork.

Mr. Allan E. Smith reports to the *Farmers' Review*, an experience in oiling wagon wheels and other woodwork. He says:—

"I have a wagon of which, six years ago, the felloes shrunk so the tires became loose. I gave it a good coat of hot oil and every year since, it has had a coat of oil or paint, sometimes both. The tires are tight yet, they have not been set for eight or nine years. Many farmers think that as soon as their wagon felloes begin to shrink they must go at once to a blacksmith shop and get the tires set. Instead of doing that which is often a damage to the wheels, causing them to 'dish'; if they will get some linseed oil and heat it boiling hot, and give the felloes all the oil they can take. It will fill them up to their usual size and tighten the tire. After the oil a coat of paint is a good thing to keep them from shrinking, and also to keep out the water. If you do not wish to go to the trouble of mixing paint, you can heat the oil and tie a rag to a stick and swab them over as long as they will take oil. A brush is more convenient to use, but a swab will answer if you do not wish to buy a brush. It is quite a saving of time and money to look after the woodwork of farm machinery. Alternate wetting and drying injures and causes the best wood soon to decay and lose its strength unless kept well painted. It pays to keep a little oil on hand, to oil fork handles, rakes, necks, yokes, whiffletrees, and any of the small tools on the farm that are more or less exposed."

New York Agricultural Experiment Station.

(These series of frequent reports are intended to inform the public of progress at the Station, rather than to give complete results.)

N. Y. Agricultural Experiment Station, {
Geneva, N. Y., September 9, 1872. }

The cow peas show a marked difference between the varieties. The Black and White variety has developed an enormous prolificacy, with but little foliage; single plants containing fifty to seventy long pods, usually containing 12 beans each. These pods, however, ripen their crop consecutively instead of all at once. The small Chocolate-Mottled pea is also very prolific, had very little foliage until after the crop commenced to ripen, and then, curiously enough, commenced to start out runners, which now have attained quite a length. The Green-eyed and the Brown-eyed pea have flourished exceedingly since the 1st of August, and now both of these varieties have entirely concealed the ground between the four feet drills. This, considering the unfavorable nature of all the earlier part of the season, offers encouraging results as to the value of the cow pea in the north for forage. One thing, however, is certain in our trials this year; that for the best results we must plant in drills and cultivate during growth rather than to sow broadcast.

Our tomatoes have troubled us exceedingly by rotting upon the vines. This rot appears decidedly contagious, contact with a portion of a rotten tomato seeming to produce rot very quickly upon the tomato subject to experiment. What produces it, or what remedial measures to recommend we can not as yet determine. The subject is one which requires minute and careful study. The Cherry varieties and the Turban are both exempt, and this, taken in connection with their earliness and their great prolificacy, makes them fit subjects for experiments in hybridization for the procuring of varieties of earlier character and less subject to rot than those we now possess. The tomato is a very watery fruit. The determination of water gave 91.26 per cent. in one instance for the Acme and 92.20, 93.22 per cent. in two instance for the Mayflower variety.

The ripe peas have now been harvested and we have to note a very wide divergence

in the prolificacy of the varieties. The least prolific variety is the American Wonder, which gave 0.15 oz. to a plant, Laxton's Earliest of All yielded 0.02 oz. to a plant, McLean's Blue Peter 0.27 oz., Thorburn's First and Best 0.39 oz., Extra Early Daniel O'Rourke 0.40 oz., Extra Early Alpha 0.43 oz. and Premium gem 0.50 oz. These it is noticed are early varieties. Of the late varieties McLean's Advancer yielded 1.10 oz., Champion of England 1.11 oz., White Marrow Fat 1.14 oz. to the plant. Under the practical circumstances of planting (May 6) William the First vegetated but 21.6 per cent. of the seed planted, while Extra Early Dwarf Tom Thumb vegetated 89 per cent. of the seed planted. Of thirty varieties of peas planted the average per cent. of seeds which vegetated was 56.6.

From the Doctor's Bulletin of 16th Sept., we select the following extract:

"Giant of Armstadt cucumber is the only English frame variety that we planted, and of this but one hill. Notwithstanding the unfavorable character of the season this cucumber has fruited abundantly and has given us a most desirable vegetable. In quality this cucumber far surpasses the so-called garden varieties. If one season's trial can be accepted as sufficient, it should be more generally grown for a garden crop by those who appreciate a large, crisp, nearly seedless, fine-flavored and attractive cucumber. * * * *

Prolificacy of Plants; Bulletin No. XI.

On August 9th we selected from our oats three stalks of the various kinds, the largest that we could readily obtain, and by means of the balance selecting the heaviest of each of the three samples, we counted the spikelets and the seed. The following table represents the maxima results:

Variety.	Spikelets.	Seed.
New Australian.....	189	254
Washington.....	153	210
Challenge.....	115	201
Pringle's Excelsior Hulless.....	91	137
Bohemian or Hulless.....	71	136
Mammoth Russian.....	80	131
White Russian.....	83	123
Chinese Hulless.....	63	112
Mold's Ennobled.....	28	72

But this prolificacy of plant need not necessarily indicate the prolificacy of the variety as grown in the field, as the White Russian, for instance, occupies less space in growing than does the new Australian,

thus enabling more plants to be grown on equal spaces.

Sept. 30th, one plant of the Black and White Cow Pea was harvested, and was found to contain 61 ripe pods and 6 unripe pods; these ripe pods shelled out 634 beans, or an average of 10 4-10 to the pod.

Weeds, however, show a most remarkable fecundity. It becomes impossible to select an average plant, as the growth varies so much in localities. We have, however, selected plants representing vigorous plants and the average plant of our fields. The number of species of weeds upon the Station farm is quite large, and the number which can start on a limited area is very surprising. June 22nd, a single square foot of ground in our pear orchard, that had been plowed and harrowed this season, was found to contain 356 growing plants, comprising 7 distinct species, not counting grasses or clovers. At the same date our forage plat contained 24 species of weeds, our lawn 13 species, our fields 30 species and our garden 23 species.

On September 28th, one vigorous Pursley plant (*Portulaca oleracea*) contained 9 branches, the average branch 15 branchlets, the average branchlet 212 seed capsules, one average seed capsule 75 seeds, thus making for an estimate a grand total of 2,146,500 seeds. * * *

A fair sample of Chick-weed (*Stellaria media*), showed 123 flowers and capsules, each of which produced from 7 to 10 seeds. A better plant showed 471 capsules, and many had opened and fallen. This plant flowers during a very long season and the number of seeds upon the plant at one time may be safely estimated at from 1,000 to 4,000. * * *

A fair sample of Curled Dock (*Rumex crispus*), had 9 stems; one stem selected as an average one had 21 flower spikes, one average spike counted 369 blooms. A single stem had, therefore, about 7750 blooms, and the nine stems about 69,000 blooms. A larger plant in the garden had 10 stems, the largest stem had 41 seed spikes, the smallest 20 seed spikes, the largest had 630 whorls, the smallest 219 whorls. The computed number of seeds is therefore at least 93,390.

On July 1st, a vigorous plant of Corn Cockle (*Lycnis githago*), had 60 pods and blossoms; 2 seed pods had 49 and 62 seeds respectively; the total number of seed may

therefore be computed at 3,300.

On June 25th, an average flower of the Ox-eye Daisy, (*Leucanthemum vulgare*), contained 802 and another flower 859 achenes to the flower. One plant had 72 and another plant had 129 blooms. While often there is but one stem to a seed, yet frequently there are more, up even to 23. One stem may have 13 blooms. The number of seeds to a plant may therefore be computed at from 8,000 to 96,000 seeds.

On July 6th, a fair stool of Chess or Cheat, (*Bromus Secalinus*) had 211 heads and an average head had eighteen seeds; the estimated number of seeds 3,798.

On August 29th and average-sized plant of pigweed, (*Chenopodium album*) had 28 branches. One branch bore 21 branchlets. One average branchlet bore thirteen flower-spikes. One average spike contained 108 seeds. The computation for the plant is, therefore, 825,552.

The seeding prolificacy of weeds is not so very surprising when we consider that in order to maintain themselves against the effort of man to destroy and to remain as weeds rather than as accidental plants, this fecundity is of the greatest consequence to the species; and that the plants we call weeds have become the select ones, those whose power of multiplication and resistance have either been originally very great or else great by modification. Could select varieties of cultivated plants be maintained against such adverse influences as have been over come by weeds, such a variety would become of incalculable value to the cultivator. Unfortunately, however, quality seems not correlative with resisting power of the species.

E. LEWIS STURTEVANT, M. D., Director.

A farmer in England raises 1200 ducks for the London market. Many of them are hatched in the winter and are kept uncovered till the approach of warm weather.

LIEBIG CO.'S COCA BEEF TONIC has received highest medals at principal expositions. Endorsed and prescribed by the Medical faculty here and abroad, as the standard tonic. It embodies the nutritive elements of the muscular fibre, blood, bone and brain of carefully selected healthy bullocks, combined with the powerful tonic virtues of Coca, or Sacred Life plant of the Incas, and a choice quality of Sherry wine. Beware of worthless imitations. Invaluable in dyspepsia, biliousness, kidney affections, female weakness, nervousness.

For the Maryland Farmer.

A Driver's Duty.

There are far to few drivers who either fully understand their duties, on the road especially, or act upon them if they do. A little less of the "I wont budge" principle might have saved many a serious and expensive accident as well as days and weeks of suffering for those who were injured. It is the driver's duty to give the road to a loaded team, if the former merely has a carriage or light vehicle, no matter if the side of the road belong to the former or not, for compassion for the horses with the loaded team, if nothing else, would prompt one in giving way. One thing which drivers seem to overlook is the fact that pedestrians should clear the way for the carriages, and should be *made* to skip and jump out of the way by threatening to drive over them. When an accident occurs through such a mistaken idea, the driver often finds it to have been a very costly mistake and is apt to remember it for many days to come.

No driver has a right to crowd the road. If he cannot or will not drive fast enough to keep ahead of the teams which wish to go at a greater speed, it is his duty to make room for the latter to pass. Sometimes the former has the disposition to keep the road and not make way, and having a strong vehicle, does not fear being damaged by others in forcing a passage. Circumstances and muscle has much to do in solving this question, especially when immediate recourse cannot be had to any other source. It is a driver's duty to stop and give assistance, if it be needed, to any other driver who may have met with an accident to harness or carriage, and to do all in his power to overcome the difficulty, for which purpose as well as for their own individual use it is a good plan to have some straps, a few nails, wire, &c., snugly stowed away in some remote corner of the carriage where they can soon be found in cases of emergency. A small wrench is also of much service. To prevent these things from spreading over the floor of the carriage, wrap them in a stout piece of paper, and put them under the seat, where they will not rattle or be thrown out. Another duty of the driver, in addition to numerous others, is to invariably see that the horses are properly cared for, wherever it is found

necessary to stop, before he thinks of his own comfort or pleasure. If the horses are fine, valuable animals, it is a very good way to keep them so, a little neglect in this particular too often proving fatal. E. Jr.

Will it pay to Steam Fodder.

Taking the word "fodder" in the broadest sense, as any kind of food for gramivorous animals, we may say that it will always pay to steam or cook feed for swine, and often for cows in stables containing 25 head or more, while for sheep and horses it will be of doubtful expediency, and usually not advisable under any circumstances. The cooking of feed for fattening swine is so important as a matter of economy, that it will pay, even though done with little regard to the saving of labor and fuel. On the other hand to cook the food for neat cattle with profit, not only should there be animals enough to make it pay, but the rations should be so carefully planned that by mingling of palatable with less relished and coarse fodder, a saving may be effected in that way. Besides, the object for which the cattle are kept is an important factor to be considered in the feeding. The flow of milk is increased by steaming the fodder, the color of the butter is however injured. The same ration will prove more fattening, while, at the same time, there will be little or no waste if the steaming is well managed. It is best to have the steamed ration composed of a variety of feed, such as corn fodder, roots, hay or oat straw, with bran and cornmeal, or cotton seed, or linseed oil cake or meal. The substitution of one kind of fodder or meal for another gives variety and relish. The coarse fodder is cooked soft, and the flavor of the roots and of the meal pervades the mass. It is not likely that any of the small agricultural steamers can be made to economically cook the food for as many as 25 or 30 head of cattle. When a boiler of several horsepower is employed to do other work, as pumping, threshing, sawing wood, grinding, cutting hay and corn fodder, etc., steam may be economically used for cooking fodder. Of this there can be little doubt. The steam box in which the fodder is placed for cooking, if it is big enough, need not be filled oftener than twice a week, and if, as already intimated, every pains is

taken in the operation to save in the items of labor and fuel, steaming fodder for cattle will be found profitable.—*Popular Science Monthly*.

SALT A PREVENTIVE OF DISEASE.—In the *Australasian Veterinary Journal* of June last a veterinary surgeon says: "Salt, I find, prevents those blood and carassic diseases so much talked about by scientific men who are trying to discover how these maladies are caused; but not one of them seems to think or say how the small organisms are to be destroyed. I ask you, how does salt cure bacon? Or, how does the cold air in the bottoms of ships keep fresh meat all right coming from Australia? Chloride of sodium—common salt—has a very forcible action, in fact, all the chloride family of medicines have, on organic life; and the time is not so far distant when the use of salt to the land will be absolutely necessary to destroy the germs of micro-organisms—even to that of the germs of splenic fever as it is thrown off by the earth-worm."

Effects of Nitrogenous Fertilizers upon Corn.

BY PROF. G. ATWATER.

Estimating a bushel of corn with its cobs and stalks to contain $1\frac{1}{2}$ of nitrogen, and to be worth 80 cents, the effects of the nitrogenous fertilizers in the special and in the general experiments may be summarized as follows, remembering that the superphosphate and potash salt, "mixed minerals," supplied the amounts of phosphoric acid and potash in a crop of not far from 55 or 60 bushels, which would also contain about the 72 pounds of nitrogen.

In the general experiments of the mixture of three hundred pounds superphosphate and 200 pounds muriate of potash, brought on the average of fifty-three experiments, about $43\frac{1}{2}$ bushels of shelled corn per acre. The special experiments however, seem to me a fairer test of what the fertilizers may do, because while made in all sorts of weather and on worn out soils, they were nearly all on soils and in latitudes fit for corn, as many of the general experiments were not. In these the mixture of 300 pounds superphosphate and

150 pounds potash salt, which can be bought for \$8.25, brought, on the average, 33 bushels of shelled corn per acre. Omitting Mr. Newton's experiment the results of which are very exceptional, the average is $44\frac{1}{2}$ bushels.

The experiments of the four seasons bear almost unanimous testimony to two things: The corn was helped but little by nitrogen in the fertilizers, and it gathered a good deal from natural sources. The increase of crop and of nitrogen in the crop will appear more clearly if we look at it another way.

In number of trials.	With nitrogen.		The average increase of corn was	The increase of nitrogen in the crop was
	Amount per acre.	Cont'ned in crop		
	Pounds.	Bushels.	Bushels.	Pounds.
95	24	18	3.6	4.8
76	48	36	5.3	7.1
42	72	54	6.6	8.8

HORTICULTURAL.

The Lysimeter.

The influence in stirring the soil in conserving the moisture to the soil receives illustration from the lysimeters. This instrument comprises three sections of soil, three feet deep, and one-tenth thousandth of an acre in area, are set level with the surface of a lawn. One is covered with sod, a second is kept bare but untilled, a third has its surface kept stirred to a depth of from $1\frac{1}{2}$ to 2 inches. At the date of our writing, September 14, no water has passed through the first and second since the opening of the month, but in the third, the one cultivated, quite a little water has percolated. This shows that No. 3, possessing more water than the others, was more quickly saturated with the rains. The same fact was so noted for August. No 1 percolated water equivalent to a rainfall of 0.00 inches; No. 2, 0.135 inches; No. 3, 0.575 inches. Thus we note that soil covered with growing grass evaporates and transpires more water than does hard soil, and bare soil more than that kept tilled.

E. LEWIS STURTEVANT, M. D., Director of New York Agricultural Experiment Station, Geneva, N. Y.

APPLES.

A late number of the *Garden*, (London,) says:—

"The report which we have received from Messrs. J. W. Draper & Son, Covent Garden, the principal London agents for the sale of these fruits, indicate that the crop is most prolific this season. From personal observations we gather that in England the crop is comparatively a failure; in France a poor half crop is estimated upon; in Germany, one-third crop only; in Holland, only half a crop, and in Belgium not half a crop—thus the prospects were never more favorable for shipments from America to England than they are this year. The American apple trade, formerly monopolized by Liverpool has during the last few years (in consequence of direct steam communication,) been gradually diverted to London, which market now competes favorably with that of Liverpool."

The larger the export to Europe, the greater amount will be lessened in our home markets, and hence the demand will increase the price at home. The greater the demand for apples the greater will be the price, and no chance of it becoming lower, hence, the greater propriety of every farmer planting apple trees of the best variety adapted to their section of the country, as prolific sorts. The apple, properly cultivated, will eventually pay at less cost of culture and harvest than any other fruit or crop, and while it is perfecting as a tree, the ground on which the orchard stands will, by manuring, culture and judicious cropping, well repay in annual yield of product of crops, at the same time increase the growth of the trees and their future productiveness. After the trees come into full bearing the ground will pay taxes and interest in grass crops, or pasture for hogs and sheep, besides some \$50 or \$100 in fruit annually. Plant an apple orchard by all means. It is, if well cared for, bound to be in the highest degree remunerative to the planter or his successors, provided a good selection of prime fruit be

made, and to do this be sure and get the advice of an experienced grower or some reliable nurseryman, conversant with the sorts of fruit best adapted to the section to which the planter belongs. Avoid, by all means, *tree pedlars or agents*.

CURATIVE PROPERTIES OF CELERY.—An English writer proclaims cooked celery as a cure for rheumatism, which it certainly will not harm if it fails to cure. We read as follows: "Celery, cooked, is a very fine dish, both as nutriment and a purifier of the blood. I will not enumerate the marvelous cures I have made with celery, for fear the medical men should, like the corn dealers, attempt to worry me. Let me fearlessly say that rheumatism is impossible on such a diet. Plain, let me say, cold or damp never produces rheumatism, but simply develops it. The acid blood is the primary cause and the sustaining power of the evil. While the blood is alkaline there can be no rheumatism, and equally no gout. I must return to cooked celery. Cut the celery into inch pieces, and boil in water until soft. No water must be poured away unless drank by the invalid. Then take new milk, slightly thickened with flour, and flavor with nutmeg; warm with the celery in the saucepan; serve up with diamonds of toasted bread around the dish, and eat with potatoes.

R. W. STEELE reported to the Dayton Horticultural Society that he effectually destroyed rose slugs with strong suds made of rain water and whale oil soap, to be applied by sprinkling with a watering-pot late in the evening for several days.

A LESSON IN EQUESTRIANISM.—Horseback riding as an art and as a beneficial exercise is one of the most, judicious habits that one could cultivate. While it affords the equestrian every opportunity for the cultivation of graceful posing, it comprises all the healthful elements of the most invigorating pleasure. Like all else in this world, however, if indulged in immoderately, the results are extremely painful, and oft times dangerous. Galled limbs, and Piles that itch intensely, particularly after getting warm in bed, are not infrequently the outcome of excessive exercise in the saddle. In such cases, however, the evil can be thoroughly eradicated by applying Swayne's Ointment, which, as a cure for Piles—itching or otherwise, has no equal.

A FINE YIELD.—Mr. Thomas Waters, near Brookville, can boast of the finest yield of wheat ever raised in this State and probably, country. From two acres, which last year had been in potatoes, he threshed 105 bushels, or 52½ bushels to the acre. The remainder of the crop averaged 38 bushels to the acre.

THE CURRANT.—The currant is an excellent fruit and should be grown more extensively than at present. Many years ago currants were grown in great abundance. There were few or no drawbacks to their successful cultivation, for the currant worm was not then known. This pest has done much bad work for a few years past but seems to be on the decline. For the past two years we have been troubled very little. The fruit is one of the most agreeable, because of its acid, and can be used in a variety of ways. It is excellent for canning, preserving its flavor exceedingly well. One of the best varieties is the Versailles. They can be readily grown from cuttings. They should be set early. Currant bushes thrive better on a rich and rather moist soil.

POULTRY HOUSE.

For the Maryland Farmer,

A Sure Preventive of Chicken Cholera.

Several experiments have been made during the last five years by different parties for the purpose of preventing the spread of chicken cholera, by inoculation or vaccination. We have, during the last two years vaccinated the fowls in 19 different yards where the cholera was prevailing badly, and in each yard we left some common fowl not vaccinated and they all died. But of the two thousand vaccinated only eleven died although they were in the same yard with those not vaccinated, that were dying daily by the scores. We have every reason to believe that this chicken vaccination is as effective in preventing cholera among fowls as vaccination has in preventing small pox among the human family. Vaccinate a hen and in eight days her system will be thoroughly inoculated, then cut off her head and catch all the

blood in some vessel, then pour the blood out on paper to dry, and you need take but one drop of this blood to vaccinate a hen, and the blood of one hen will vaccinate your whole flock. Catch the fowl you wish to vaccinate and with a pin or knife make a little scratch on the thigh, (just enough to draw blood,) then moisten a little piece of the paper with the dried blood on and stick it on the chicken's leg where you scratched it, then let the fowl run and you need have no fear of chicken cholera. As the result of my many experiment I have now blood enough I would suppose to vaccinate ten thousand fowls for which I have no use as I do not sell patent medicines. If any of your readers are enough interested in poultry to try this preventive, by writing to me I will send free of any charge enough dried blood to start with, all I ask is, that they send immediately, before the blood loses its strength, and report the result of their experiment to your many readers.

W. H. GRIFFITH.

Zanesville, Ohio.

Bronze Turkeys.

The Bronze is the king of turkeys. In short they are noted for their great size and rich, changeable bronze colors. They are always beautiful, are good foragers and it costs little to raise them where grasshoppers and insects are plenty. They are No. 1 layers, hardy and easy to raise; they make a very rapid growth and if the winter is not too hard, or does not set in too early, young gobblers will weigh twenty-five pounds by Christmas, or, that is, at about six months of age, and hens thirteen or fourteen pounds. Turkeys, unlike chickens, grow all the winter and make weight for the feed they consume. The Bronze do not fully get their growth until they are about three years old. At maturity hens weigh fifteen to twenty pounds, and gobblers from thirty to forty pounds, each.

In most sections turkeys are very profitable, and double the weight can be made from about the same feed and trouble that is given to the rearing of small, common turkeys. It pays to keep the best "blooded" stock, if we get much larger returns for outlays. We give it as a fact that many persons do not understand that tur-

keys shrink from three to nine pounds in shipping, as being nervous they eat little, and the journey worries them. They soon recover however. Customers are apt to weigh them on receipt, and many a seller gets a cursing for sending lighter weights than he represented, when it was owing to the shrinkage of the birds. They should not be weighed under three or four weeks of goods keeping after their arrival on a new place. Shrinking happens the same with other fowls, too.—*Dirigo Rural.*

Fish for Poultry.

In preparing fish for fowls, we prefer to chop them up raw, add a very little salt and pepper, and feed in small quantities in conjunction with grain and vegetables; but for young chicks it is advisable to boil before feeding, and simply open the fish down the line of the back bone, leaving to the chicks the rest of the task. This food should be given to layers sparingly, or we may perceive a fishy smell about the eggs, especially if the fish is fed raw. All who can, will do well to try this diet for their flocks and note its effect on egg production. We have always marked a decided increase in the rate of laying, following an allowance of fish fed in moderate quantities.

There are hundreds of our readers who live near or on rivers or lakes, or the seashore where they can get considerable offal fish, such as are either too small to market or are cast out as unfit to be sold. Hundreds of bushels of these fish are annually sold for manure, either composted or plowed in direct. In this connection they are very good, though many a basketful could be put to better account by feeding them to your fowls; and they are very fond of this diet, though care must be taken not to feed it exclusively, for it may cause extreme laxity.—*Hartford, Conn. Poultry World.*

A POWERFUL CONTRAST.—When the soldiers of the dark ages were attacked with tetters, they could do naught but suffer. Medical science had not yet developed a cure. This labor of love and humane duty was left for Dr. Swayne, whose Ointment for skin diseases is as infallible in its results, as was the inspiring potency of Patrick Henry's memorable words, "Give me liberty or give me death."

FOUND AT LAST.—An agreeable dressing for the hair, that will stop its falling, has been long sought for. Parker's Hair Balsam, distinguished for its purity, fully supplies this want.

Treatment of Fowls.

In cold weather farmers cannot live outside some sheltered place, nor, like the grouse and some other birds, subsist on berries. There are no insects, no vegetables to feed on, and the possibility of picking up grain when the ground is frozen or covered with snow is not to be entertained at all. The domestic hen is not a wild fowl now, whatever she may have been primarily, so she requires shelter, care and proper food under domestication, and as much in accordance with habit as possible summer and winter.

When the fowls are deprived of outdoor range towards winter, flesh must then be substituted for insect food, for vegetables, cabbage, cauliflower, turnips, carrots, potatoes, &c., and also a rotation of grain to keep them healthy and thrifty. Give only enough to keep up eagerness for food when the feeding time arrives.

To be a good breeder is to be one who is willing, in part at least, to give back an equivalent for what he receives from his properly tended flock.

Fowls cannot be expected to do well in too close confinement, even if they are provided with good food; exercise is essential to health, and if debarred from this by not having ample range, the must have some way provided for them that they can scratch and dust themselves, daily, within the narrow limits of their quarters.—*Albany, N. Y. Poultry World.*

Periods of Incubation.

The Goose.....	30 days.
The Turkey.....	28 "
The Duck.....	28 "
The Peafowl.....	28 "
The Pheasant.....	24 "
The Hen.....	21 "
The Pigeon.....	18 "
The Canary.....	13 "

The Poultry Yard.

"ROUGH ON RATS."—The thing desired found at last. Ask druggists for "Rough on Rats." It clears out rats, mice, roaches, flies bed-bugs, 15c per box.

DON'T WASTE MONEY on trashy extracts when you can buy a lasting perfume so delightfully fragrant and refreshing as Floreston Cologne.

For the Maryland Farmer.

Fishing and Fish Culture.

It may be thought the subject at the head of this article has but little or no direct connection with agriculture, and therefore should find no place in a purely agricultural magazine.

But when it is taken into account that the farmer, in his capacity as a tiller of the soil, is one of a class of food producers, by a little stretch of the imagination, fish culture may be construed to be an auxiliary branch of farm operations.

There are many farms upon which the surface conditions are such, that by a little expenditure of time and money, a small pond or reservoir can be made, in which fish culture can not only be made a matter of profit, but a pleasure.

It is an old saying that, "all work and no play makes Jack a dull boy," and hence it is the duty of every farmer who has boys or men in his employ, to furnish occasional days for rest and recreation, and fishing affords an opportunity for sport that is much enjoyed.

It is much better that boys should find pleasure in something that may be turned to account, rather than in what may be disadvantageous to them as boys or as men either.

It is not unfrequently the case that the contour of a farm is such, that by the erection of a dam, a surface of an acre or more can be overflowed with water to a sufficient depth to insure the success of fish culture of some of the more common kinds of fish.

In northern waters black bass have been exclusively introduced and are considerably valued as food fishes, while the sport of catching them is intense, because of their great sporting character. They are decidedly gamey, and to be successful in their capture requires a considerable degree of skill, and when once captured make excellent pan fish, or when of sufficient size, if stuffed and baked, form a delicious dish.

The bass is a rapid grower and attains a size varying in weight from one to six or eight pounds in northern lakes and ponds. It is considered a good catch to capture three or four fish that weigh as many pounds apiece. The writer, with a brother-in-law, has taken as many as fourteen in a day, that would weigh from two and one-half to three pounds apiece. A year ago,

last summer, a son of the writer, then ten years of age, captured ten in one day, alone, the heaviest of which weighed three pounds. Other varieties of fish that are easily cultivated are perch, pickerel, roach, land-locked salmon and German carp, although the two last have not yet become at all common in the waters in this section.

All that is required in ordinary ponds or reservoirs is to once get the fish introduced and they will take care of themselves and reproduce without further trouble. It is very gratifying to have an opportunity to spend a few hours in sport and at the same time obtain a delicious dish for the family, and is surprising what an amount of food can, at comparatively little cost, be furnished to a family, and then for the sport that is just immense, and where a man or boy can occasionally have a day of such sport, the extra work accomplished because of the rest afforded will much more than make up for the time lost.

In mountain streams trout can be successfully introduced, and will, in a little time afford a very rich and delicate dish.

WILLIAM H. YEOMANS.

Columbia, Conn.

Corn Cob Meal.

Reviewing the experiments for the past four years, leaves no doubt that it is an exceedingly wasteful practice to feed clear corn meal alone to a growing pig.

For the second and third periods, allowing cob meal to be worth one cent per pound, we find the growth of lot two has cost \$3.95; I have sold them as shoats for six cents per pound. For the first and second period or for ninety days, the growth of shoats cost 4 to 6 cents per lb. and are now sold for five cents, live weight; 5½ cents has been paid here this fall, earlier. These lots have been confined closely or entirely to the food named, and weighed. A little bone was occasionally added, and this is the first time for four years that I have not had pigs cripple in the hind legs. They do not have large pens. It will be remembered that Prof. Sanborn is the newly elected professor of agriculture, of the Agricultural College of Mo.—*Ex.*

"BROWN'S BRONCHIAL TROCHES are excellent for the relief of Hoarseness or Sore throat. They are exceedingly effective."

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

EZRA WHITMAN, Editor,

COL. W. W. W. BOWIE, Associate Editor,

141 WEST PRATT STREET,

BALTIMORE, MD.

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Advertisements to secure insertion in the ensuing month should be sent in by the 20th of the month.

COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia Maryland and Virginia.

Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

We call attention to our Reduction in Price of Subscription.

The Maryland Farmer for 1883.

This number closes the year 1882 and the 19th year of the MARYLAND FARMER. On entering upon our 20th volume, we are glad to congratulate our friends upon the generally increased prosperity of the country, which in all its past history has never been equalled. The seasons have been propitious and the farmers have prospered, but not so much from that circumstance, as we are inclined to believe from their own efforts, mainly induced by reading agricultural journals, like the Maryland Farmer, which gives the science and practical details of those who make farming a study and reduce their acquired knowledge to practical tests. Never was there a time in the history of our long experience as a journalist when we could so confidently appeal for continued support from our subscribers, advertisers and readers as now. The long list of advertisers show how it pays to advertise in our columns, and our increased circulation has enabled us to put our paper at a price so low that the poorest in fortune can obtain it, while we have added to its size, and ornamented it with a large number of illustrations of domestic animals, fowls, and useful implements to show to the reader clearly what intelligent correspondents and others are writing about. We can boast of some admirable correspondents who write for no paper but ours, and whose writings are always read with avidity. Therefore we ask every subscriber to renew his subscription and send along the names of his neighbors who have heretofore failed to avail themselves of this agricultural fount of solid worth, that has steadily increased in worth and value annually, while it has been enabled to reduce the price of subscription with the valuable premiums to the small sum of \$1.00 for 12 numbers, every number being worth more than treble that sum.

Our Subscribers, Advertisers and Readers are urgently requested to read and ponder over our Prospectus for the next year, which is found as an accompaniment for this number, which closes the nineteenth volume of the MARYLAND FARMER.

National Agricultural Convention, Grand Pacific Hotel, Chicago, Illinois, December 12-15, 1882.

The Third National Agricultural Convention of the American Agricultural Association, to be held at the Grand Pacific Hotel, Chicago, December 12th-15th next, will be one of the largest and most interesting gatherings of agriculturists ever convened in this country. The exercises will be of great interest, and consist of addresses and papers by leading men in agriculture and public affairs, including ex-chief Justice J. F. Kinney, of Nebraska; Hon. Chauncey M. Depew, of New York; Hon. J. R. Dodge, Statistician U. S. Department of Agriculture; Dr. Peter Collier, Chemist U. S. Department of Agriculture; Dr. E. Lewis Sturtevant, Director New York Agricultural Experimental Station; Dr. John A. Warder, of Ohio; Dr. N. S. Townshend, of Ohio; Major H. E. Alvord, of New York; Francis D. Moulton, Esq., of New York; Hon. D. S. Wheeler, Secretary Nebraska State Board of Agriculture; Hon. Cassius M. Clay, Kentucky; Hon. Daniel Ammen, District of Columbia; Dr. Thomas P. Janes, Georgia; Col. Robert Beverly, Virginia; Col. George E. Waring, Jr., Rhode Island, Hon. J. B. Grinnell, Iowa, and many others.

The principal railroads leading into Chicago will carry, at reduced rates of fare, those wishing to attend the Convention.

Discussions of practical questions pertaining to agriculture will take place, and much attention will be given the subject of ensilage, now attracting such great interest in the East, and also to stock-breeding, dairying, transportation and the tariff. Action will be taken with reference to holding a National Agricultural and Industrial Exposition next year. A day or two will be devoted to visits to noted farms in the vicinity of Chicago, and to places in and about the city. His Honor, Mayor Carter

H. Harrison, will deliver the opening address and welcome the delegates.

The American Agricultural Association, under whose auspices the Convention is to be held, is an organization of nearly 1,000 leading agriculturists, and those engaged in kindred pursuits in the United States. Its objects are, the promotion of agriculture in all its branches and the interest of those connected therewith. It is recognized for its high character and broad views. The two Conventions held under its auspices, in New York, in 1879 and last winter, both of which were attended by representative men from all sections of the United States, were pronounced the most interesting and valuable of any ever held. The organization embraces within its membership the leading farmers, stock-breeders and scientific men of the United States.

The President of the Association is Hon. N. T. Sprague, of Vermont, one of the largest farmers in the country. The Secretary is Jos. H. Reall, editor of the *Agricultural Review*, of New York, who will have his headquarters at the Grand Pacific Hotel, Chicago, where he should be addressed for information. The Board of Directors and Vice-Presidents of the Association include some of the best men in the country. Every farmer and all interested in agriculture, stock-breeding, dairy farming and kindred pursuits, are cordially invited to attend this Convention and take part in its proceedings. Address the Secretary for ticket entitling to all the privileges of the Convention.

The Association's head-quarters are World Building, New York, and 142 Dearborn Street, Chicago, Ill.

THE MARYLAND POULTRY AND PIGEON CLUB will hold their Second Annual Exhibition in Baltimore, December 21st to 26th, at Raine's Hall, corner of Baltimore street and Post Office avenue. The exhibition promises to be one of the finest ever held in this city, and fanciers from all over the country have promised to exhibit some of the finest specimens of poultry and pigeons, of the latter, the principal exhibitors from Baltimore will be Chas. Becker, Pouters and Trumpeters; T. S. Gaddess, short-face Tumblers; H. F. Whitman, Jac-

obins and Owls; Geo. Schwinn, Turbits, Magpies and Swallows; F. A. Rommel, Quakers; G. H. Wrightson, Nuns; and Dr. Atkinson, of Satinets and Blondinetts. The premiums will amount to upwards of \$2,000, and the special list of cups, medals, &c., is large and very attractive. The attendance of ladies and gentlemen at this beautiful show of poultry will no doubt be very large, and from various parts of the country.

RURAL BRANCHING SORGHUM.—We received from Mr. Richard Peters, Atlanta, Ga., a fine head of this species of sorghum, of which he grew a large quantity the last year. In his note he says it is "identical with the Millo maize of South America, being a wonderful forage and seed plant." It evidently produces a large amount of seed, which is excellent for pigeons and poultry. It strongly reminds us of what the Agricultural Department a long time ago sent out as Egyptian wheat, and which we cultivated as an ornamental plant in the garden, and found very useful as a forage plant and also abundant in grain for poultry. The grains are thousands on a head and are as large as squirrel shot; hard, round and white, with a pink or red spot on each.

THE MARYLAND IMPROVED LIVE-STOCK BREEDERS' ASSOCIATION held a meeting lately, at the Carrollton hotel.—Mr. John G. Clarke, presided, with Mr. T. Alex. Seth, Secretary. Dr. F. W. Patterson, of Baltimore county, who recently returned from Holland, read a paper on the Cattle of North Holland or Friesland. The paper read and the remarks made by Dr. Patterson were highly instructive in statistics, and entertaining in both matter and manner. A vote of thanks to Dr. Patterson, was passed, and on motion of Mr. Seth a resolution was passed offering to co-operate with the Maryland Agricultural and Mechanical Association, at the fair which

it is proposed to hold in 1883. We are promised the substance of the Doctor's very interesting remarks, and hope soon to present them to our readers for their edification.

ACKNOWLEDGMENTS.

Our acknowledgments are due and gratefully returned to Mrs. H. B. B., for a bottle of her excellent Tomato Catsup, which, if not the best, has certainly never been excelled. Its color—bright red salmon;—flavor—exquisite, and highly, yet delightfully seasoned, while it was of just the right consistency, being free from lumpy pulse and not too liquid. It was splendid.

The Niagara Grapes received from the Secretary of the N. G. Co., Lockport, N. Y., were as delicious as beautiful. These white grapes are hardy, have large bunches and are very compact; the grapes are large medium size. They are a great acquisition to the lover of the grape and should be in the possession of every grape-grower. The bunches sent us were perfect, yet, had been fully ripe as far north as the northern part of New York, Sept. 15th, and were picked Nov. 3rd from the vine, showing how long they will hang upon the vine after maturity. This is a great consideration. Candidly, we think these specimens of the Niagara Grape as equal to, if not, the best white grape we have yet eaten.

FREAKS OF NATURE.—Mr. W. H. Snyder, of Nelson county, Va., has kindly sent us a small box of specimen second growth grapes of the Norton variety. These grapes were perfected and ripe on the first of November, being the second product of the same vine this year, it having a new bloom while its first crop was maturing. This is one of nature's wonders in prolificacy during favorable seasons.

Those excellent caterers, the Messrs. Wagners, who have so long and skillfully

managed the popular "Green House" restaurant nearly opposite to us, showed us a sweet potato which is a natural counterpart of a duck, with wings, tail and neck, face, bill, and almost the feet, and about the same size and weight. How strangely nature in her vegetable products sometimes imitates the forms in the animal kingdom.

THE DAIRY.

Dairy Farming.

The Hon. George B. Loring, in an article on dairy farming says:

"It would seem therefore, that in rearing animals for the dairy care should be taken that the young are not so fed as to develop a tendency to great size either in frame or in adipose tissue, or so as to establish in the end a race which has every faculty except that of producing milk. I would not advocate a deficiency of food for young dairy stock, but I would argue against an excess of articles of a highly stimulating quality. The plan of the Scotch farmer is undoubtedly a good one—to take their calves early from the dam, feed them from the dish, and bring them to solid food or pasture as soon as the condition of the young stomach will allow. Instead of linseed-meal they use a great quantity of oatmeal—an article of food much less predisposing to fat and keeping up a vigorous growth. We have in this country a good quality of hay, everywhere a basis of feeding; and after the calf is weaned, or after she has had milk enough to give her a fair introduction into life, hay, in the form of hay-tea, and afterward of rowen, is undoubtedly the best food the animal can have, especially when aided by a few roots such as turnips or carrots. In such cases milk is abundant at a very early age, and skimmed milk is advantageously used as a substitute. I should not recommend the use of grain, especially that containing a superabundance of oily matter, as Indian corn and linseed for young dairy stock, or even for dairy cows when in the flush of milk. Perhaps cornmeal, sparingly, or barley or oatmeal may be used in winter, should the animal seem not to thrive well. But a calf that is properly fed after weaning, and fur-

nished with a good pasture, will be carried through the first winter most satisfactorily on good, sweet hay, especially rowen, with roots. In this way can a uniform and well balanced animal be produced, which, when put to dairy service, will not become coarse and raw-boned in appearance, nor take on flesh at the expense of the milk-pail.

Creamery vs. Farm Dairy Butter.

Mr. Alvord, in his address on the factory system of butter making, at Rutland, before the Vermont Dairymen's Association, stated that the farmers of Franklin county, Mass., sent off during the year 1880, 490 tons of butter, which brought on the average about three cents per pound less than creamery butter from factories in the vicinity. This loss of three cents equalled in the aggregate the pretty little sum of \$25,148, which might have gone into the pockets of the farmers of Franklin county and at the same time have saved their wives an untold amount of hard work and unceasing care and anxiety. The average number of pounds of milk required to make a pound of butter at the factory, the entire season through, was about 25.

English Rules for Butter Making.

1. The cream should be removed from the milk before the latter has become sour. The reason for this is easily explained. As soon as the milk begins to turn, curd is produced, and it is then impossible to remove the cream without taking off some of the curd also. Curd means cheese; and if curd is made up with cream into butter, the latter must necessarily have a cheesy flavor, and will in a short time become "strong," and very inferior in quality.

2. As soon as the butter makes its appearance, and while still in a granular state, the buttermilk should be run off. Plenty of cold water should be thrown into the churn and the butter washed by turning the churn a few turns; two or more changes of water should be used until the butter is thoroughly cleansed. Butter is frequently damaged by overchurning. It is quite an error to suppose that after butter once forms more can be obtained by further churning. Every revolution after the granules are about the size of Indian corn or small nuts deteriorate the quality.

3. Butter should not be touched by hand. The water should be applied by means of a butter worker.

No animal on the farm pays better for good keeping than the cow.

Cows purchased from rich lands seldom do well on poor soils.

One cow, well fed, will produce as much milk as two carelessly treated; the former will be kept at profit, the latter at a loss.

The best economy is to keep cows in such a manner as to make them give the greatest quantity of milk with the greatest profit.

Carrots and other roots cause cows to give milk in abundance and of an excellent quality.

One kind of forage, even of the best, may not furnish in suitable proportions, all the elements necessary to produce the best milk; therefore give a large variety of food but guard well against anything that will taint the milk or butter.

Pure water at regular intervals is essential to the best results.

Cows which are near calving should be fed with substantial food and lodged in some clean, warm apartments by themselves; let their drink be lukewarm for a day or two after calving.

Great milkers pay as they go, but seldom carry much flesh on their bones. It is not good policy to allow a cow to lose a single pound of flesh; it costs money, and it will cost more to replace it.

Cows seldom yield their milk kindly to a person who is not gentle with them.

Cleanliness in the dairy is sometimes classed among the cardinal virtues.

•••••

Cows that have access to water at all times, will drink often, but little at a time, and return to their feeding. Cows deprived of a sufficient supply of water, fail in milk and flesh, and when they are allowed to fail it is almost impossible to bring them back to their proper yield of milk and condition of flesh, at least without extra expense and trouble.

•••••

C. M. MOSEMAN & BROS.' office is the head-center for all prominent horsemen of New York City. In a letter of recent date says: "We are perfectly satisfied that there never was anything made to equal Kendall's Spavin Cure, nor can there be anything to take its place, as it removes the trouble, and no remedy can do more." Read advertisement.

New Patents.

By our Washington Correspondent.

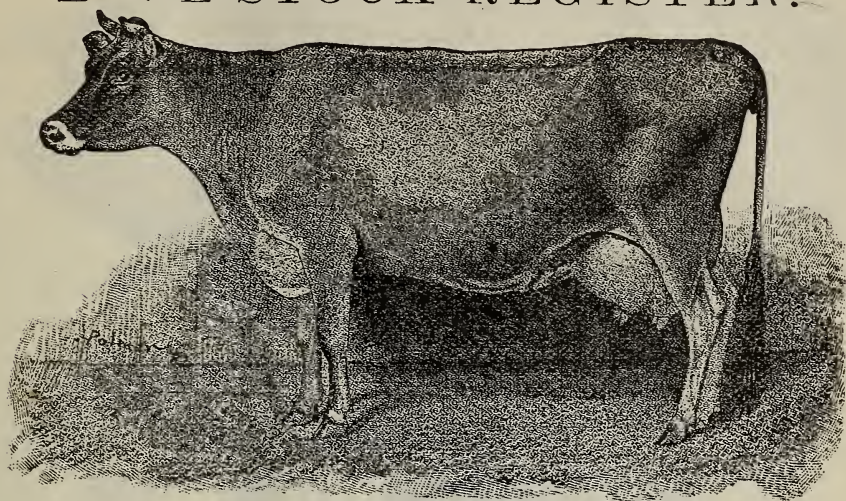
The following patents relating to agriculture were granted at the Patent Office, since 1st of November.

A combined plow and harrow, the invention consisting in the application of the latter to the ordinary plow. This harrow is pivoted on the side of the handle, by a short arm, and is capable of being raised or lowered as may be required. It is claimed that in operation it harrows the first and second rows as the third is being plowed, and so on, the harrow being of a size to cover two furrows. Another patent is for a portable house made in sections and having double sides and roof, metallic chimneys and window and door frames. It is to be held down by anchor posts with screw rods passing from the interior to the same. The spaces between the walls is filled with water proof material. It is said to be a very cheap and warm house. An ingenious contrivance is a potato peeler. The potatoes are fed into a cylinder and projected against a series of knives, springs operating to turn the vegetable from side to side, while water from a perforated pipe sprinkles and washes it. Improvements in grain cleaners and grain binders were granted to Chicago men. A corn planter improvement is a complicated device by which partially rotating disks placed upon the shaft of a planter, covers and uncovers the cells of the dropping wheel as it advances. It is controlled by the foot. A dairy apparatus for removing cream from a milk vat by atmospheric pressure is devised. The cream is forced through a pipe, in a condition ready for churning. A beehive is another patent. It consists mainly of improvements by which to provide convenient access to all parts of it so that bees could be fed dry or liquid food, or the honey board be reached with safety. A patent is granted for a grain and seed thrasher of complicated device, and still another for the application of a spiral spring under the back board of a wagon, to somewhat ease the unruly propensities of that form of vehicle.

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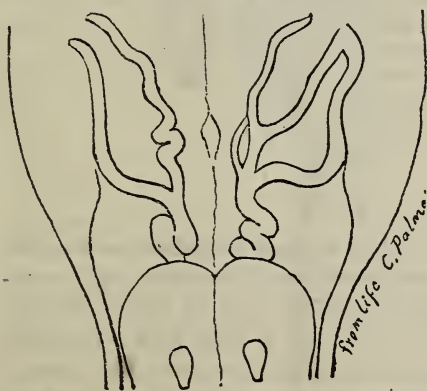
Don't drive a spavined horse as long as you can get Kendall's Spavin Cure for \$1 a bottle. As a powerful liniment for deep-seated pains on both man or beast it has no equal. See advt.

LIVE STOCK REGISTER.



Value 2nd 6844

VALUE, 2d, 6844.—Our illustration of this month is of the celebrated Jersey cow, Value 2nd., the property of Messrs. Watts & Seth, of the Windsor herd. She is but six years old and has the largest record for weekly yield of butter, of any Jersey cow living, viz., 24 lbs. 3 oz., with her second calf. She is a large fine looking cow, with great constitution and immense digestive apparatus, so essential to large yield.

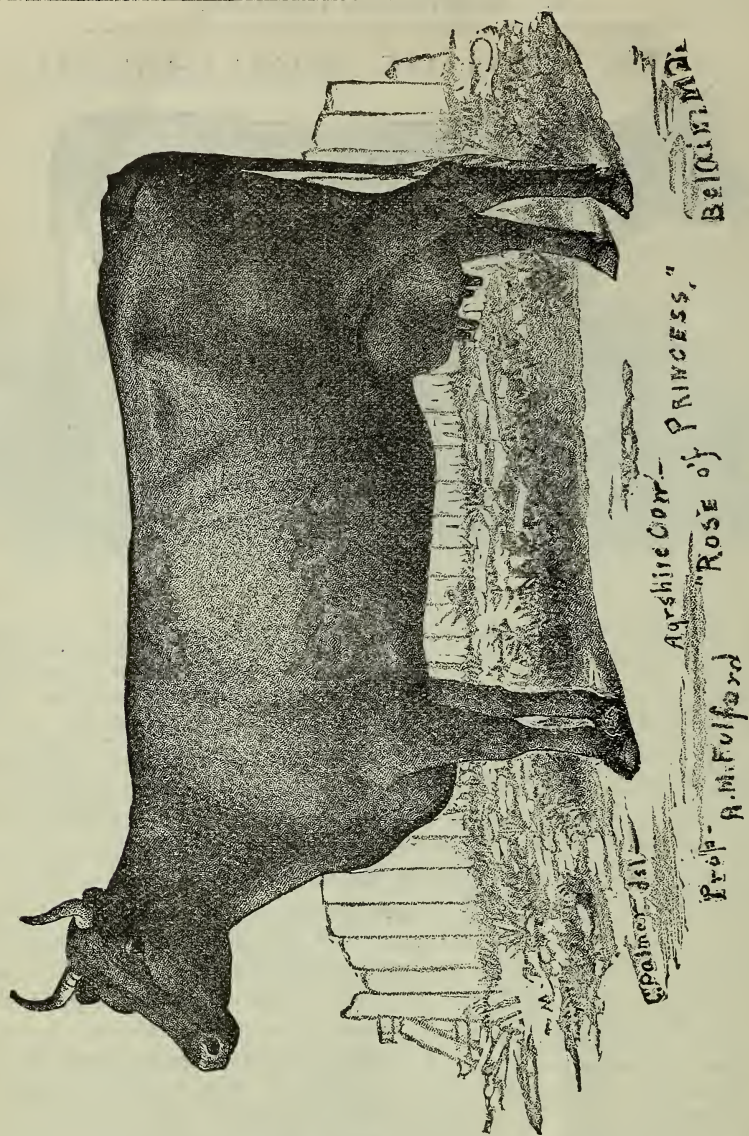


The diagram of her milk veins, also given herewith, show that the supply of blood to the lacteal glands is large, but the best evidence of her worth is the undoubted test of 24 lbs. given as above.

The *Hagerstown Mail*, in speaking of the animals on exhibition at the Washington County Fair, say of her—"But the centre of attraction was the grand cow, Value 2nd, around whom could be seen all day and even in the rain, a group of admirers, the majority of whom were ladies.

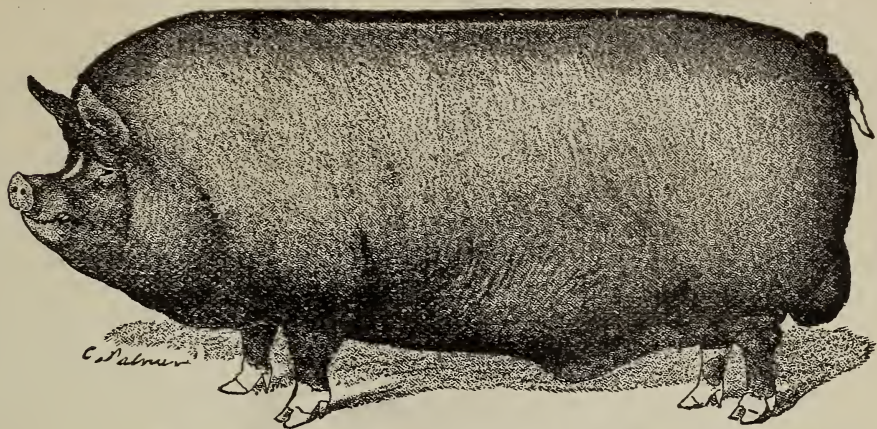
As might have been expected this cow had the honor of winning 1st prize in her class, and also sweepstakes as the best cow of any age or breed. On Thursday, she was decorated with a handsome wreath by some of the ladies of Hagerstown, the central flower of which was a pansy, the name of the fashionable part of value 2nd's breeding." Value 2nd is conceded to be the best Jersey cow in Maryland, and a fortiori the best in America. She has been bred to the handsome bull, Island Valeur, illustrated in our last issue, and which cross, as we then said, must, if there is any science in breeding, produce the best results.

IN Great Britain there is a sheep on every acre and one-third of cultivated land. In this country there is an average of but one sheep on thirty-four acres.



The Ayrshire cow, Rose of Princess is a solid, rich, dark red, an exception to the usual coloring of the breed, other such are known, but they are not numerous. While in the possession of Mr. Fulford, she has had three calves; bred to two different bulls about equally red and white, she produced red and white calves; but bred to a bull almost entirely white, she had a calf all red with the exception of a very small white spot under the brisket. This calf was a

bull. We mention these facts as they are somewhat different from what might be expected when breeding for color. She has a very rich yellow skin, with a curvative escutcheon of the first order, and gives a large quantity of rich milk. Her picture, which is a good likeness, was taken when she was not in full flow of milk, and hence does not show the full capacity of her bag. Rose of Princess, when a yearling, sold for \$550.



Berkshire Boar, "STERLING VALUE," the property of Alex. M. Fulford, Esq., Bel-Air, Md.

STERLING VALUE has been largely used by Mr. Fulford, as a breeding boar, and from whom he has bred many fine pigs. This boar was bred by Mr. Heber Humphrey, of England, who should feel much gratified by his excellent record—was exhibited by him in 1881, was highly recommended and had a reserve number at the Royal Show. For Mr. Fulford he won 1st at Minneapolis, Minn; 1st at Chicago, where, among others, he beat a distinguished winner at the Royal and other shows; 1st at the Illinois State Fair, at Peoria, and 1st at the Maryland State Fair. In 1882, he won 1st at the Illinois State Fair again. At all these shows, he won over very heavy competition. He has proved himself a good getter.

Sale of Jersey Cattle.

Fifty-five head of thoroughbred Jersey cattle were sold by auction at the American Horse Exchange, Broadway and Fiftieth street, October 18. The prices got were satisfactory, but were not at all equal to the amounts recently paid in the Exchange for Jerseys. The total receipts were nearly \$22,000, or an average of about \$400 a head. Many well known stock raisers were present, among others Col. H. S. Russell, Wm. Crozier and W. Watson. Col. Russell seemed to have set his heart upon securing Mabel Labey, a beautiful cow, three years old. She has the reputa-

tion of being a fine milker, and her pedigree is unexceptionable. The bidding for her was brisk from the start, and Col. Russell had to pay \$2,000 to get her. Fancy Fan went to T. A. Havemeyer for \$1,550; Buzz and Lorne, two fine cows, to J. I. Holly, for \$800 and \$1,400, respectively. Flower Girl to William Crozier, for \$775; Jeu d'Esprit to H. J. Pinton, for \$640; Princess of Southborough to G. S. Fokett, for \$610; Stockholder to R. Goodman, Jr., for \$550; Tio to W. H. Wilkinson, for \$550; Young Duchess to W. Watson, for \$500, and Saumerez Farmer's Glory to F. Bronson for \$500.

The Horse.

No other domestic animal is or can be as thoroughly adapted to the wants of man as the horse. When from cattle we get their milk and beef, and from oxen their draught, we are done with the bovine race and can find no other possible use for it. The hog is useful only for what it furnishes for food and mechanical purposes in its bodily essence. From the sheep we expect only fl-ece and flesh. But what, outside of food purposes—and not a few races of people would not make this exception—do we not expect of the horse? For work or for pleasure he is the quick, ready, willing, intelligent and capable servant of the human race. He enters with most cheerfulness into the hardest of labor, carries man's heavy burdens, hauls his heavy loads, breaks up his tough lands, cultivates his crops, markets his produce—doing every-

thing in fact that his rare intelligence at all fits him for. In administering to our pleasures he is the same unfailing friend. The sporting man, the man of business, the man of leisure, alike go to the horse for their recreation. Entering with the keenest zest into the excitement of the speeding, he furnishes by far the most popular sport of the day. In the shafts or under the saddle he gladly rests and refreshes the worried brain worker, the imprisoned merchant, and the wearied farmer. He is alike subservient to child or adult, to the gentler or to the sterner sex, refusing no service which his herculean strength will enable him to perform. The breeding of horses has, perhaps, received more thought and unremitting study than any other class of stock, and the result is, that there are breeds, strains and families perfectly adapted to every special use. The draught horse, the general purpose horse, the harness horse, the driver, the saddler, the trotter, the runner—have all been bred to exactly fill the bill required of them. Is it any wonder that in such a creature man finds his best friend in all the brute creation? Is it strange that the tenderest regard thus frequently springs up between master and servant? Indeed the man who regards his horse with other than kindly feelings is unworthy of the name.—*Pitts-bury Stockman.*

Two Points Settled.

The English flock-master has settled two points in British experience:—

First, that mutton is more profitable than wool; and second, that among English mutton consumers there is a decided preference for Down or black-faced mutton. Tender, juicy flesh, with a fine grain and a rich flavor, ripe, and yet carrying plenty of lean meat, is that which suits the English market. A combination of these qualities is found to most perfection in some of the black or gray-faced breeds or their crosses. This preference on the part of the buyers is so marked that the butcher is enabled to give at least two cents per pound more for darkened mutton than for any of the white-faced and long-wooled sheep.—*Ex.*

OUR LETTER BOX.

Application of Lime.

Campbell Co., Va., Nov. 2, 1882.

Editors Maryland Farmer:

Often observing in your valuable magazine very useful and approved practical suggestions as to the best methods to accomplish certain kinds of farm work, I would seek now to have your views in the next issue of the *Farmer*, as to the best way to apply lime to lands. Having so far had but short experience in farm life, I am unable in my own mind to choose that method of spreading lime in connection with green fallow, such as peas or clover, that gives promise of most relief in what, at best seems heavy work. (1.) It would seem best for full benefit to spread after the fallow, but the labor and difficulty of passing over plowed land with heavily freighted wagons containing the lime seems altogether discouraging. (2.) Again, is it better to spread the lime from the wagons, or should it be placed in heaps and then spread. (3.) Again, is lime ever spread with the hand, as fertilizer is sometimes sown, or is the shovel the indispensable instrument? Your views and instructions will be highly appreciated.

Yours most respectfully, H. S. E.

[The better way is to plow the green crop deep under. Harrow two or three times with a "Thomas Smoothing Harrow," or any of the same character, then spread the lime and drill in the wheat, grass seed, with or without fertilizers, and then roll. It is no more labor to haul over such a field, harrowed well, than over a field of high clover or covered with pea vines.

2. Yes, if it has been well slaked. It is put in small heaps sometimes to be well slaked before being spread on old turf, a few months before it is plowed.

3. Lime is never spread by hand as fertilizers sometime are. The shovel is the proper instrument, unless you avail yourself of a lime spreader, a machine which is now in use and well repays cost, where much lime or even fine manure is spread. There are also machines that are

made to spread very evenly, coarse manure also, and are capable of spreading ashes, fertilizers, lime, &c. The tendency of lime is to sink rapidly and hence most farmers prefer to spread it on the top of young grass which will not be turned under for two or three years.

We think this the best plan and prefer to dose the land with 25 bushels per acre, once in three years, rather than apply the fifty bushels at one dose. Lime is not *per se* a fertilizer, but it converts humus into plant food and by various chemical processes is a powerful agent in the renovation of worn out soils. Remember, however, that some soils need not lime, having already a sufficiency supplied by nature.—
EDS. MD. FAR.]

Union Bee-Keepers' Association.

HAGERSTOWN, MD., Oct. 18, 1882.

Meeting of the Union Bee-Keepers' Association of Maryland, Virginia and West Virginia. President D. A. Pike in the chair. The following order of business was attended to:—Calling the roll; secretary's report; treasurer's report; report of standing committee on Constitution and By-Laws, constitution drafted by them, adopted. Then followed the President's address. Receiving of new members, Wm. M. Bowers, of Illinois, was invited to a seat in this body.

Election of officers for the ensuing year: President, D. A. Pike, Smithsburg, Md.; Vice-Presidents, Thomas Footer, Cumberland, Md.; E. C. Jordan, Stephenson Depot, Va.; Wm. Anderson, Harper's Ferry, W. Va.; S. Valentine, Double Pipe Creek, Md.

Reading of essays:—A vote of thanks was tendered to C. M. Hicks for his essay on Transferring from Box to Frame Hives. The above subject was discussed at seven o'clock, P. M., Vice-President Wm. Anderson, presiding. The first thing done was receiving of members, and then followed discussion on the following subjects—"Queen Rearing" and "The Albino Bee."

October 19th, at 10 o'clock, A. M., the members visited in a body the Washington County Agricultural Fair, and held a short

session in Chas. H. Lake's tent, where we found one of the largest exhibits of bees, honey and bee-keeper's supplies. Adjourned to meet, subject to the order of the President, in Hagerstown, next summer.

J. LUTHER BOWERS, *Secretary*.

FOUTZ'S HORSE AND CATTLE POWDERS.—These very excellent powders have been on the market for twenty-five years past and seem to grow in popularity as in time with the stock men of the country. We have heard of no one who has found fault with these powders, and have heard a great number who have used them, speak of them in the highest terms. They are certainly worth trying and we really do not think any farmer will regret purchasing these alternative and invigorating powders that have been tested satisfactorily so many years. See advertisement in this number.

The Sale of E. B. Emory, Esq.

Took place at his home in Queen Anne's county, Md., on Thursday, the 23rd ultimo. We attended and spent one of the pleasantest days of our lives, it being a lovely day and a beautiful moonlight night, five hours of each were spent on the waters of the grand Chesapeake bay and Chester river, on board of the "slow but sure" boat Corsica, with kind and attentive officers and a choice set of pleasant gentlemen, all with various motives on their way to the sale. On arrival at the wharf, fast teams soon whirled us over a rich and beautiful country, with immense orchards everywhere, to the grand old place of Mr. Emory's grandfather, the noted General Emory of the glorious old times of Maryland, when the Eastern Shore produced the renowned Lady Clifden, bred by General Emory, and made both famous in the whole Union by her performances on the turf, when we had a Boston, Fashion, and other kings and queens of the race fields.

The dwelling was erected some 200 years ago, and the grounds give evidence of their old time magnificence in the stately forest trees of oak, chestnut and hickory, with an expansive lawn and meandering walks, bordered with hedges of cedar, box and holly, the latter was the first we ever saw. It seemed to be very old, but vigorous in leaf, green and glossy, with its bright red berries, like rubies, thickly scattered. The box was trimmed in various forms to represent monumental obelisks, fifteen feet high, walls and low borders for flower beds, taking the observer back to the ages of Anne or Elizabeth, when such horticulture was in vogue before the wonderful discovery of Columbus, but initiated by the early settlers of Maryland.

On reaching the dwelling we turned to look on the landscape presented by the broad expanse of water, wood, pasture and cultivated fields that stretched out at one glimpse, and we recalled the words of Milton;

"Betwixt them, lawns or level downs, and flocks
Grazing the tender herbs, were interspersed."

The scene was enchanting, but we were forced by the hospitable host to enter upon another scene long to be remembered by the hungry travelers—the long table covered with the substantials, and the side-board, where the generous fluids forbid the discussion of "local option."

Pardon us for saying that during the day we had the honor to meet the accomplished hostess and her lovely little daughter, and we thought they were jewels appropriate to so splendid a casket.

The sale commenced at one o'clock, and continued until about sun-set. Some 30 young animals, colts, fillies, and calves, with a few old cows and horses were sold, averaging only \$100 or thereabout. A rather low price, considering the blood and fine condition.

This we are glad to learn is merely an initiatory or experimental sale. Mr. Em-

ory intends to have an annual sale of blooded stock, which will be of great benefit to the farmers of Maryland. He is the possessor of some two thousand acres of rich grass land, and devotes it and the products mainly to stock breeding, in which pursuit he is an enthusiast. We saw splendid Berkshires in large numbers, of all ages, beautiful South-down sheep and Cotswolds hard to beat. A small lot of Cotswold ewe lambs were to themselves, and are superb. The bucks of that breed were fine but at this time of the year seemed to command no bidders.

We were pleased with our trip and to meet many old friends in the large crowd which was present at this first annual sale in Maryland, of pure bred stock of all kinds. Under all circumstances the sale was successful, and we hope that in the future there will be found a still greater gathering of the intelligent farmers of that fertile and beautiful county, and strangers from distant points, not only to buy fine stock, but to behold the rich, level, alluvial prairie-like lands of Queen Anne's county, Md., with the delectable treasures of the fine waters that seem to environ every farm house and thus make it a Paradise—reached by fast railroads and slow steamers.

THE PEOPLE'S MUTUAL LIVE STOCK INSURANCE Co., of Baltimore, Md., report October 20, 1882, the amount of business done by this company since its inauguration is something marvelous. Issuing its first policy on the twenty-sixth day of January, 1882; it has at this date insurance in force covering a valuation of one half million dollars. No such success was ever before achieved by an Insurance Company in so short a space of time, and it certainly shows that the public must have confidence in its management.

WELSH & BRO.—225 W. Baltimore St., of the late firm of Canfield Bros. & Co., have a general assortment of American and Swiss watches, all the newest styles of jewelry of the finest quality and at the lowest prices. Those wanting to purchase Christmas presents should not fail to examine their stock.—See advertisement.

LADIES' DEPARTMENT.

Chats with the Ladies for December.

BY PATUXENT PLANTER.

"I heard the bells on Christmas day,
Their old, familiar carols play,
And wild and sweet
The words repeat,
Of peace on earth, good will to men!"

If ever there was a time when all men and women in our land can hail Christmas joyously, in the words of the great and recently dead poet of America, with "peace on earth and good will to men," it is the coming grand festival of the Savior's birth. The whole country is teeming and loaded down with God's benificent goodness and mercies. We have been blessed with abundance—the measures are running over—and yet I fear our farmers are not sufficiently grateful. The farmer is bound to grumble and fret. Instead of being content, he, like the horse leech, still cries for "more" though blood flows to its full repletion. Let us mend our ways, and now that the feast of Thanksgiving is over and we are anticipating the pleasures of Christmastide, give our hearts full play in returning thanks to our good God who has so kindly sent us the fruitful season and grand returns for our labors. Let us open our hearts and study to recall to all our friends, young and old, the fact that we are alive and desire to be remembered by some trifling present or a few lines over our autograph.

Such souvenirs of friendly regard I have already received during the autumn, and it made me feel proud in the pleasant anticipation of the fat turkeys and pumpkin pies that were to be sent to the poor printers about Thanksgiving time, and the hams, mutton, sausages and plum puddings that are such graceful Christmas presents.

Every young wife who justly prides herself on her culinary abilities, and who desires an enviable reputation as such, should aim to receive the public tribute of a diploma from some accomplished epicurean editor. An editorial certificate from one recognized as a connoisseur and careful judge in household economy, is worth far more than the premium from an agricultural society, obtained from a committee which perhaps had just tasted a hundred bottles of wine, catsup, pickles, hams, preserves, cakes, etc., and then in their disorganized state of taste, given their decision under the fire of a hundred pair of envious, interested, searching eyes. Who, of ye all, will be the first to challenge the printers and editors of your acquaintance for their calm, disinterested judgment of your culinary skill, or witchery in needlework?

Journalistic.

THE BALTIMORE TELEGRAM came to us on the 21st of October in a much enlarged and improved form. We are pleased at this evidence of the public appreciation of a weekly paper which caters so ably to the various tastes of its readers. News, literature and the sensational occurrences of the week are to be found in its well arranged and neatly printed columns and we commend it to our country friends who want a good weekly paper.

THE ELLICOTT CITY TIMES has recently changed hands, and Mr. Edwin Warfield, the popular senator from Montgomery county, in the last Legislature of Maryland, and lately connected with the "*Dry*," of Baltimore city, has become owner and editor. Under his control it has been enlarged and bids fair to become one of the most popular and ably conducted weeklies of Maryland. We wish it, with our earnest commendation, the highest success in journalism.

THE BALTIMORE SUN.—The *Sun* has appeared since the election in an enlarged form, with new and larger type, thereby giving more light to readers than ever before. It has already shone bright, but has brightened wonderfully since the Comet and the Election have engaged our attention night and day. Long may this pioneer in furnishing the earliest and most reliable news flourish and continue to be the exemplar for well directed energy and sound judgment.

THE STAR, of Marion, S. C. is before us in its new dress and enlarged form. It does credit to the ability and enterprise of its editors and publishers. The *Star* is one of the oldest and most popular papers of the South.

THE NEW YORK SUN—Is one of the leading democratic newspapers in this country and is treasured by us, among our exchange dailies, very highly, it being newsy, entertaining, reliable and bright with humorous witticisms. It should be read by everybody.

Publications Recived.

AMERICAN NEWSPAPER ANNUAL, 1882, N. W. Ayer & Sons. This is one of the most complete and handsomely gotten up list of all newspapers in this and other countries, with their localities, prices, terms, standing as to circulation,

and a mass of other information to advertisers and business men, that has ever been put before the public. The Messrs. Ayer deserve great credit and thanks for this splendid work, gotten up with so much care and so much expense. It should be on the table of every *business* man in the land.

FIFTEENTH ANNUAL REPORT of the Ohio State Horticultural Society for 1881-82. An interesting report of this excellent association, established as far back as 1847, as the Ohio Pomological Society. Like old wine, age has improved it.

DEWEY'S CATALOGUE OF COLORED FRUIT PLATES.—These chromos are important to all nurserymen and buyers of fruit and ornamental trees.

**Report of Frank Brown, Esq., President
of the Maryland State Agricultural
and Mechanical Association.**

GENTLEMEN:—I have the honor to report that since the last meeting of this association, all the accounts for the exhibition of 1881 have been settled, and debts due by the association have been paid, leaving a small balance in the treasury.

In consequence of the withdrawal of the Legislative appropriation, hitherto accorded, the Executive Committee were unwilling to undertake the responsibility of holding an exhibition during the present fall, deeming it more advisable to complete the payment of all outstanding obligations on the part of this association.

The condition of the fair grounds, at Pimlico, has been greatly improved since the last exhibition, additional stand and stable accommodations have been added and the old buildings and grand stand overhauled and repaired.

With the introduction and successful working of the steam railway into the grounds, and the awakened interest in the agricultural and manufacturing interests of the State, I feel that a fitting opportunity presents itself for holding an exhibition in the Fall of 1883. It would be an appro-

priate precursor of the Industrial Inter-State Exhibition, now being so zealously advocated by many of our prominent citizens, and should command the co-operation and support of all. I therefore recommend it to your favorable consideration.

Respectfully,
FRANK BROWN, *President.*

List of Officers of the Maryland State Agricultural and Mechanical Association, elected at Annual Meeting, held October 31st, 1882.

PRESIDENT.

FRANK BROWN.

VICE-PRESIDENTS.

Hon Wm. Walsh, Alleghany County.
Dr. E. J. Henkle, Anne Arundel "
A. S. Abell, Baltimore County.
S. M. Shoemaker, Baltimore City.
E. Whitman, " "
Enoch Pratt, " "
Col. W. A. McKellip, Carroll County.
Hon. Daniel Fields, Caroline "
Hon. D. R. Magruder, Calvert, "
Hon. Wm. M. Knight, Cecil "
Dr. S. Mudd, Charles County.
Dr. Wm. R. Hayward, Dorchester Co.
L. Victor Baughman, Frederick County.
Patrick E. Hammil, Garrett "
Hon. Edwin Warfield, Howard "
Herman Stump, Harford "
George Spencer, Kent "
Spencer Jones, Montgomery "
C. E. Coffin, Prince George "
— Robinson, Queen Anne's "
Levin L. Waters, Somerset "
Gen. B. G. Harris, St. Mary's "
Colonel Ed. Lloyd, Talbot "
Hon. W. I. Aydelotte, Worcester "
Hon. Wm. T. Hamilton, Wash'gton Co.
Col. Lemuel Malone, Wicomico County.
W. W. Corcoran, District of Columbia.

EXECUTIVE COMMITTEE.

Oden Bowie, Washington Booth, Jas. L. McLane, Wm. R. Devries, R. F. Maynard, E. Gittings Merryman, Ed. Patterson, Jr., David L. Bartlett, J. Alex. Preston.

J. D. Ferguson, *Secretary.*

It is understood that the Executive Committee will meet on the 5th of Dec, and no doubt concur in the views of the President as to holding a fair on their grounds in the autumn of 1883. We shall say more in our next number, of the State fair.—EDS. MD. FAR.

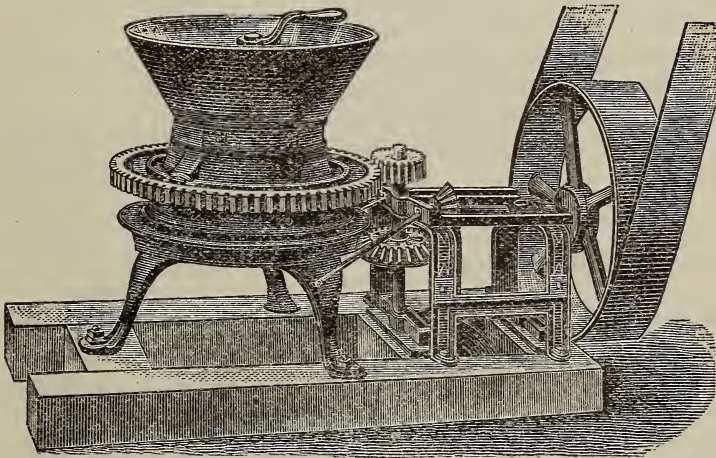
A Valuable Machine.—The New Geared Corn and Cob Mill.

The cut below represents a new geared corn and cob mill, which can be run by water, steam or horse power. It is E. Whitman, Sons & Co.'s "Young America Corn and Cob Mill," now so popular, with gearing instead of lever. There are no changes in the mill proper, and any one having the lever mill can get the gearing to fit it and then have a geared mill at a small cost.

The amount of power required to drive it is four-horse power. It has about five revolutions to one of the lever mill, and

Corn Canned on the Ear.

Mr. Geo. W. Baker, an extensive canner, of Harford county, this year canned a large quantity of corn on the ear. The *Bel-Air Ægis* says the corn is closely packed in heavy tin cans, holding from eight to twelve ears each, and when taken out for use is found to be as sweet and delicious as corn fresh from the field. No chemicals are used in the process, but the corn is merely subjected to a more intense heat than when put up in the ordinary way. Mr. Baker will have the new process patented.



E. Whitman, Sons & Co.'s "Geared Young America Corn and Cob Mill." Patent applied for.

therefore grinds about five times as fast.

It is made with a special view to strength and durability, is well braced and made of the best material. Those who want a mill that can do more work than the lever mill, cannot fail to be pleased with this mill. See advertisement in this journal.

CHAS. W. HAMILL & Co.—Corner of Calvert and German streets, Baltimore, will furnish beautiful articles for Christmas presents, all of their own manufacture, that will be durable and worth all they cost. Call and see them.

A Word to our Subscribers.

The subscriber who is in arrears and finds in this number enclosed a bill of the same, we ask that it may be promptly attended to, that we may enter upon our new volume with clean pages and renewed vigor. The sums due by each are small and easily paid, but are to us a large aggregate, and we therefore appeal to all of our friends to settle up arrears, and at once comply with our terms which are **cash in advance**, so as to enable us to furnish so useful and elegant a Journal for the price of \$1.00 per year, with a premium added. Those not in arrears will pardon us for the gentle reminder to renew subscriptions.

MARYLAND AGRICULTURAL COLLEGE.

A special meeting of the board of trustees, of the Maryland Agricultural College was held November fifteenth, at Barnum's Hotel. There were present; Gov. Wm. T. Hamilton, who presided; John Carroll Walsh, Hon. Thos. J. Keating, Carroll Goldsborough, Ezra Whitman, Allan Dodge and Wilnot Johnson. Prof. J. D. Warfield acted as Secretary of the meeting. President Parker, of the college, announced the appointment of C. C. Norwood, a post graduate of Johns Hopkins University, as professor of mathematics and languages. This appointment was approved by the board. The resignation of President Parker, which was to take place on the 15th Nov., having been accepted at the last meeting, the trustees elected Allan Dodge, of Georgetown, President, *pro tem*. The board adjourned to meet at the same place the second Wednesday in January, at 2 o'clock, P. M.

Consumption Cured.

An old physician, retired from active practice, having had placed in his hands by an East Indian Missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung affections; also a positive and radical cure for general debility and all nervous complaints, after having thoroughly tested its wonderful curative powers in thousands of cases, feels it his duty to make it known to his fellows. The recipe, with full particulars, directions for preparation and use, and all necessary advice and instructions for successful treatment at your own home will be received by you by return mail, free of charge, by addressing with stamp, or stamped self-addressed envelope to

Dr. M. E. CASS.

1y

201 York St., Jersey City, N. J.

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